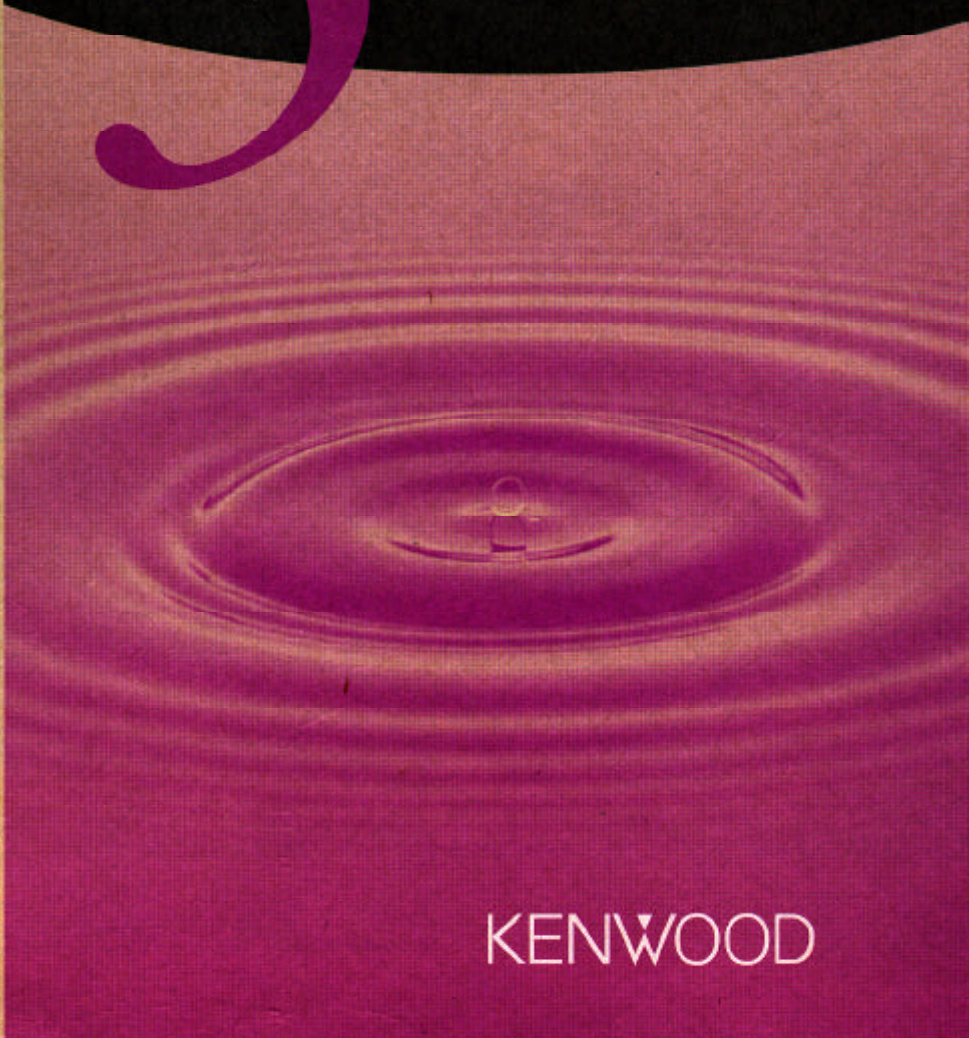
3 stage

Using your KC-Z1 Controller



KENWOOD

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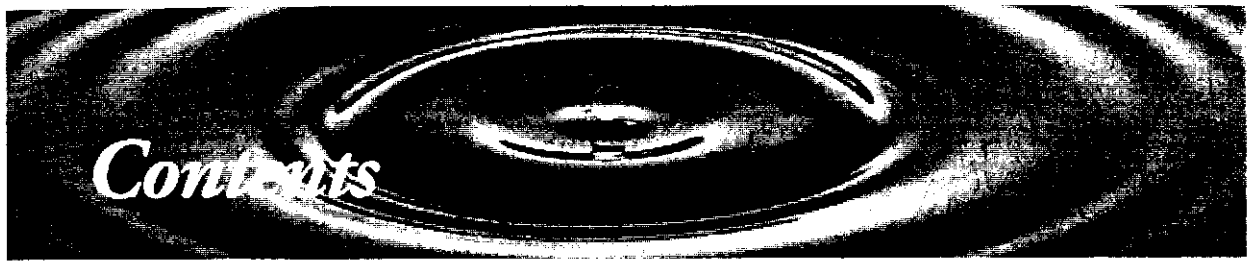

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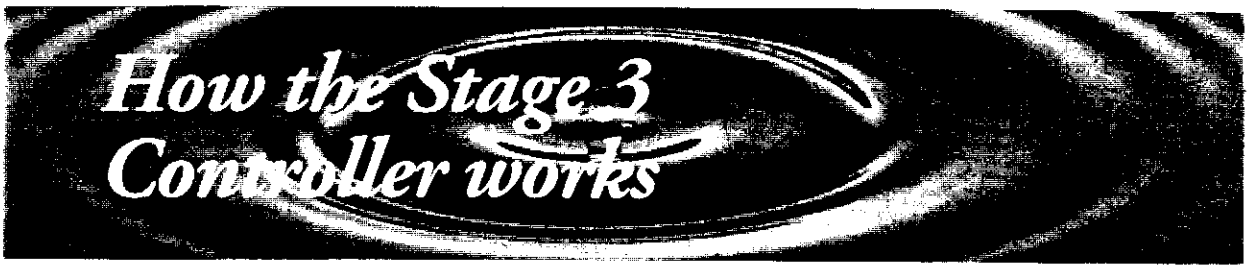
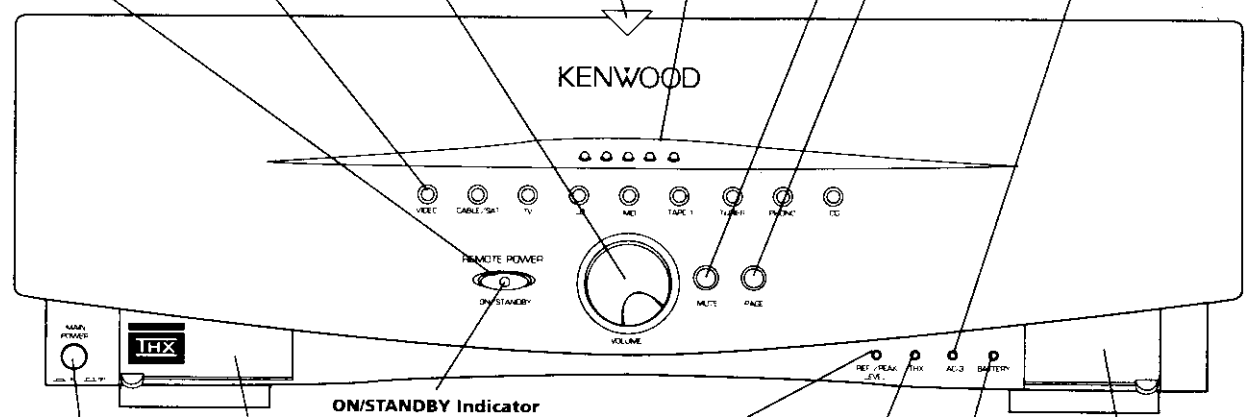


Your new Stage 3 Controller is designed to let you operate all of your entertainment components—your TV, VCR, laserdisc player, CD player, even automatic curtain-closers and light dimmers if you have them—with one simple instrument: the TouchPanel. Remember that before you can use the TouchPanel to operate these components, they must be connected to the Controller and set up (see *Setting up your Stage 3 Controller* for details).

You also use the TouchPanel to operate the functions of the Stage 3 Controller itself:

- FM/AM radio
- Home theater surround sound options, which includes playing movies in Dolby Surround Pro Logic or Dolby Digital (AC-3)
- Sound processing options, which includes speaker balance and delay, treble and bass adjustments, THX Cinema, and DSP Logic
- System presets and alarms, which allow you to program the Controller to carry out commands at the touch of one button or automatically at a later time.

The front panel controls



MUTE Switch
Touch to mute the sound, touch again to restore the sound

TouchPanel Lock
Locks the TouchPanel into its Dock

TouchPanel Dock
Attach the TouchPanel here when it is not being used

PAGE Switch
Touch and the TouchPanel emits a tone to help you locate it

INPUT Selectors
Touch to select an input source. The active input glows BLUE.

VOLUME Control
Turn clockwise to increase the volume, turn counter-clockwise to decrease the volume

DOLBY DIGITAL (AC-3) Indicator
Glows GREEN when a Dolby Digital (AC-3) input signal is detected

REMOTE POWER Switch
Touch to turn the unit ON

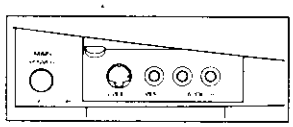
ON/STANDBY Indicator
Glows RED when the unit is in STANDBY mode; glows GREEN when the unit is operational

MAIN POWER Switch
Push to apply power to the unit. places the unit in the STANDBY mode.

INPUT OVERLOAD/REFERENCE LEVEL Indicator
Flashes GREEN when a source's output level attains THX or Dolby reference level; flashes RED frequently or remains RED for 1 second or longer when the source's output level is overloading the Stage 3 Controller's input circuitry.

BATTERY CHARGE Indicator
Glows RED while a battery is charging, glows GREEN when the battery is fully charged

BATTERY CHARGE Compartment



VIDEO 3 Inputs
Connect a video playback source (such as a camcorder).

THX Indicator
Glows GREEN while in THX Cinema mode

About the TouchPanel

How the TouchPanel sends information

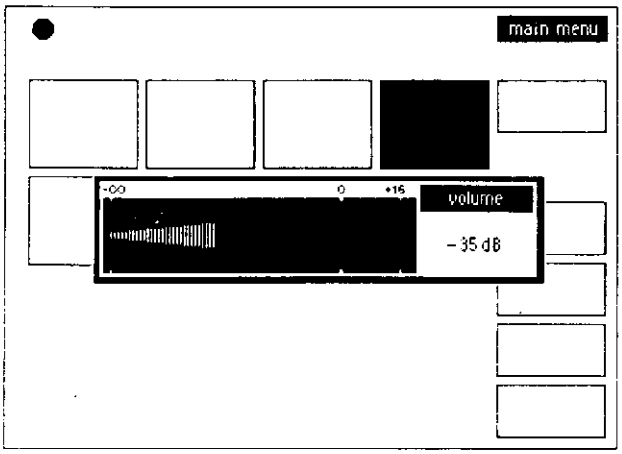
The TouchPanel communicates with the Controller using radio waves, so you can operate the controller from anywhere within approximately 100 feet of it.

Touching a button

When you touch a button, the TouchPanel responds with a chirp sound so you get audible feedback.

Using the volume control

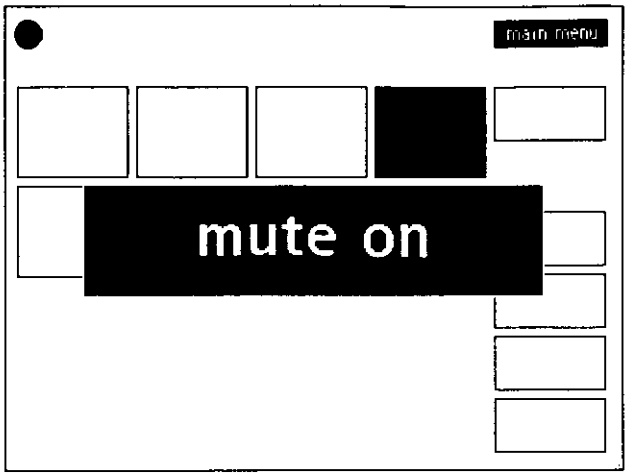
When you use the TouchPanel to change the volume, it displays a volume indicator.



- Each time you push the VOLUME buttons, the volume changes in 1 dB increments. If you hold the button down, the volume changes continually.
- The volume indicator disappears about 2 seconds after you finish adjusting the volume.
- If you change the volume using the knob on the Controller, the volume indicator does not display. However, the next time you change the volume using the TouchPanel, the new volume level will be displayed.
- When you turn the Controller on after it has been powered-down, the volume automatically resets to a low level, no matter what the volume setting was when the Controller was powered-down. This prevents accidental damage to the system and avoids a sudden burst of loud music.

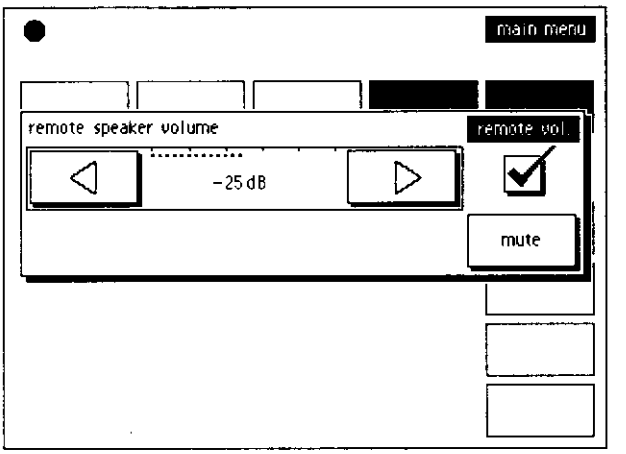
Using the mute control

You can instantly set the volume to zero (mute) by pressing the MUTE button. Pressing it again restores the volume. When the Mute function is activated, the TouchPanel displays this screen:



Using a second set of speakers

If you've set up your system to do so, you can use the TouchPanel to control a second set of speakers independently of the main speakers in your system. Touch the REMOTE SPEAKER VOLUME button on the Main Menu. The TouchPanel displays the remote volume indicator.

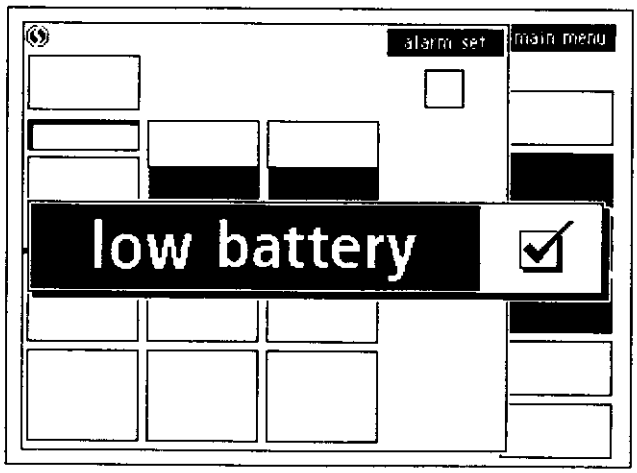


- Each time you push the volume arrow buttons, the volume changes in 1 dB increments. If you hold the button down, the volume changes continually.
- The volume indicator disappears about 2 seconds after you finish adjusting the volume.
- When you turn the Controller on after it has been powered down, the volume automatically resets to a low level, no matter what the volume setting was when the Controller was powered down. This prevents accidental damage to the system and avoids a sudden burst of loud music.

About battery life

Under constant use (with the LCD display constantly lit), a fully-charged battery will last 4 to 5 hours before it needs to be recharged. Under normal use (the LCD display set to shut off a few seconds after it's used), the battery should last much longer. See "Setting the LCD Sleep Time" for instructions on adjusting the TouchPanel to help maximize battery life.

The TouchPanel screen will display the following message when its battery needs recharging:



- Exchange the battery with the fully-charged extra battery in the controller's Battery Compartment.
- The batteries can be recharged and reused approximately 250 times. You will know a battery is nearing the end of its life when its use time shortens.
- Only use DURACELL DR-17 batteries.

About the rechargable batteries

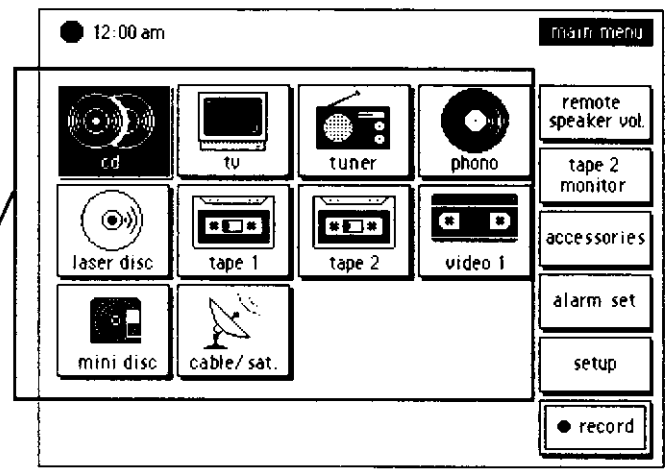
- When batteries need recharging, recharge them as soon as possible. Also, do not expose the batteries to high temperatures. This will help the batteries maintain their charge.
- For more information about batteries, contact Duracell directly at 800-551-2355.

Using the TouchPanel

When you've finished connecting your components and setting them up, the TouchPanel's Main Menu will look something like the screen below.

At any time, to get to the MAIN MENU screen, touch this button:

The main menu



SELECTION BUTTONS
Allow you to activate or adjust different functions

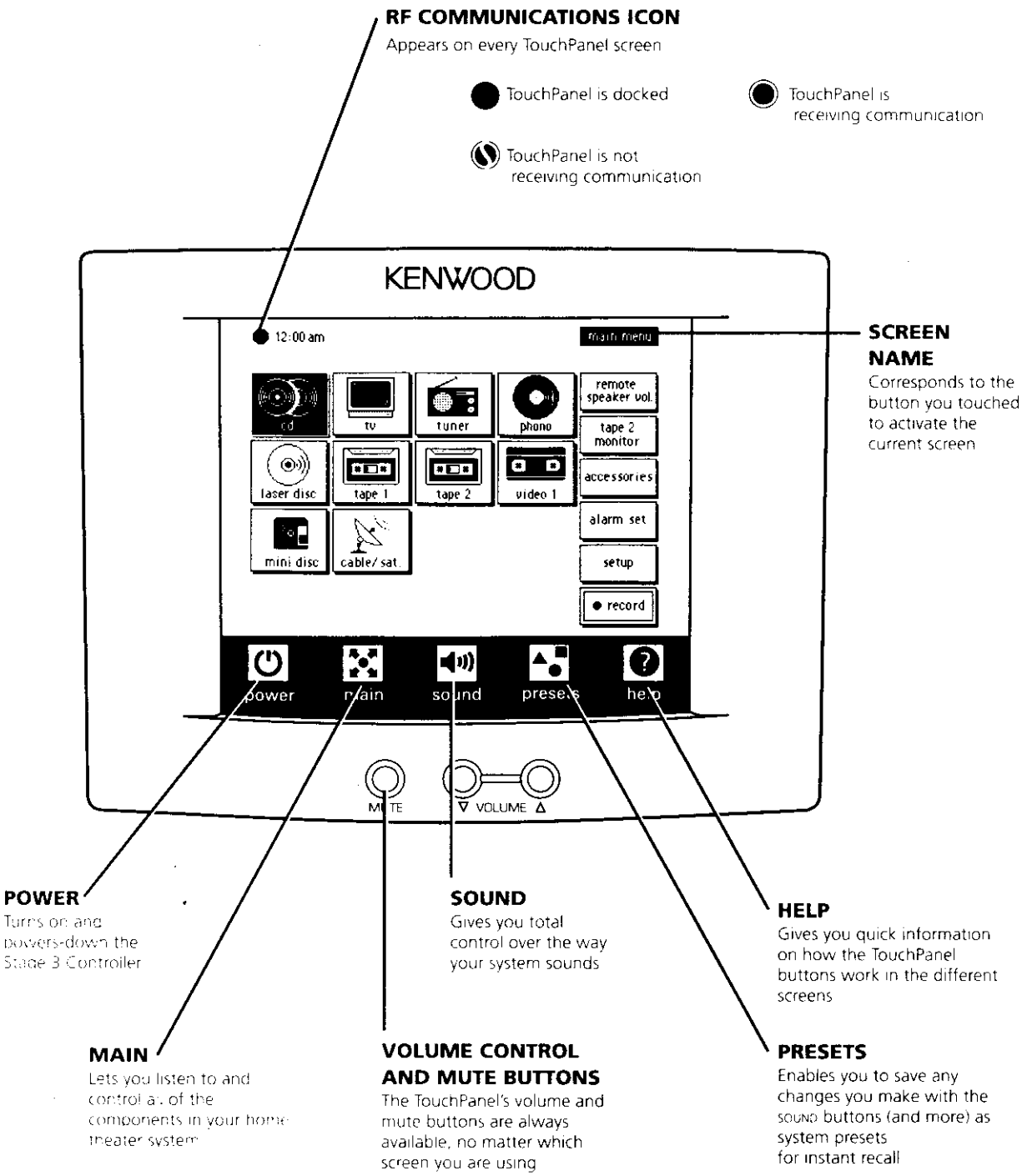
COMPONENT BUTTONS
These buttons show you the components you have connected to the Controller, and will look different than this example depending on the components you've installed. Each of these component buttons takes you to a screen you can use to operate the component shown.

About SL16 components

If a function is not available with your Kenwood SL16 component, an icon still displays on the TouchPanel the first time you use it. It will disappear after the TouchPanel communicates with the component.

Other TouchPanel buttons and indicators

No matter which TouchPanel screen you are on, general controls and indicators are available.



About the auto-off feature

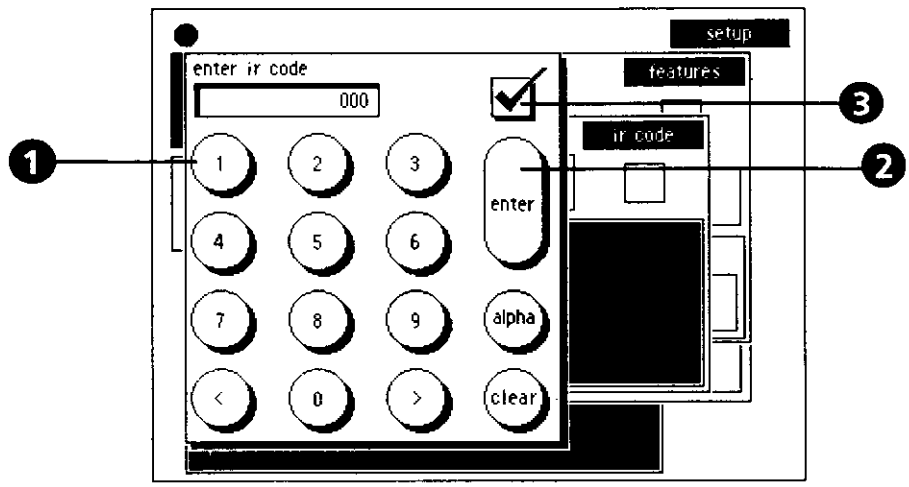
The TouchPanel turns itself off after a period of time if it hasn't been used. This feature saves battery power, and can be adjusted (see *Setting up your KC-Z1 Controller*). To reactivate the TouchPanel, simply touch it again.

Using the calculator pad

Anytime you need to enter a number or create a label, the touch panel displays the calculator pad. Here's how to use it.

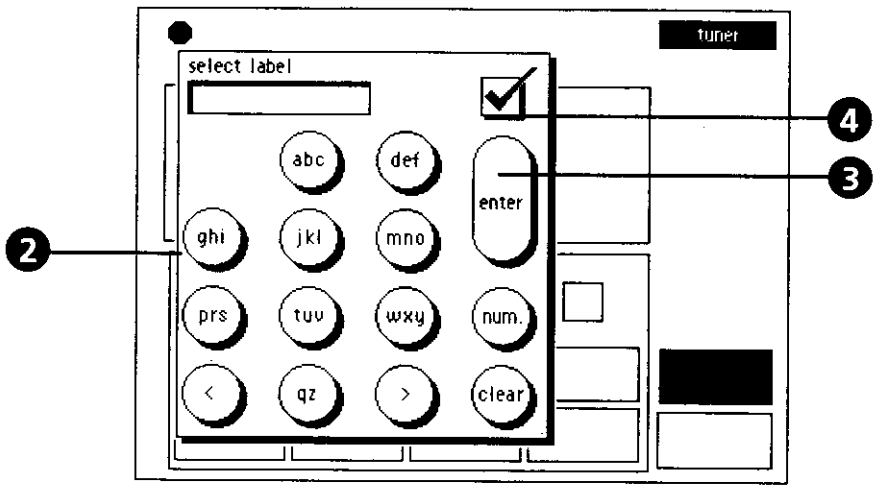
Entering numbers

1. Enter the number using the NUMBER buttons.
2. Touch the ENTER button to accept the number.
3. Touch the CHECK-MARK to save what you entered. No change is made if you use the CHECK-MARK before the ENTER button.



Creating a label

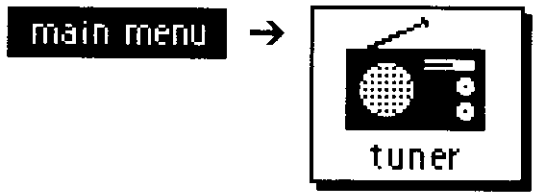
1. Touch the ALPHA button on the Calculator Pad.
2. Touch the LETTER buttons to enter letters. Touch once for the first letter, twice for the second letter, three times for the third letter. Touch the ARROW FORWARD button to enter the next letter.
3. Touch the ENTER button to accept the label.
4. Touch the CHECK-MARK to save the label. No change is made if you use the CHECK-MARK before the ENTER button.



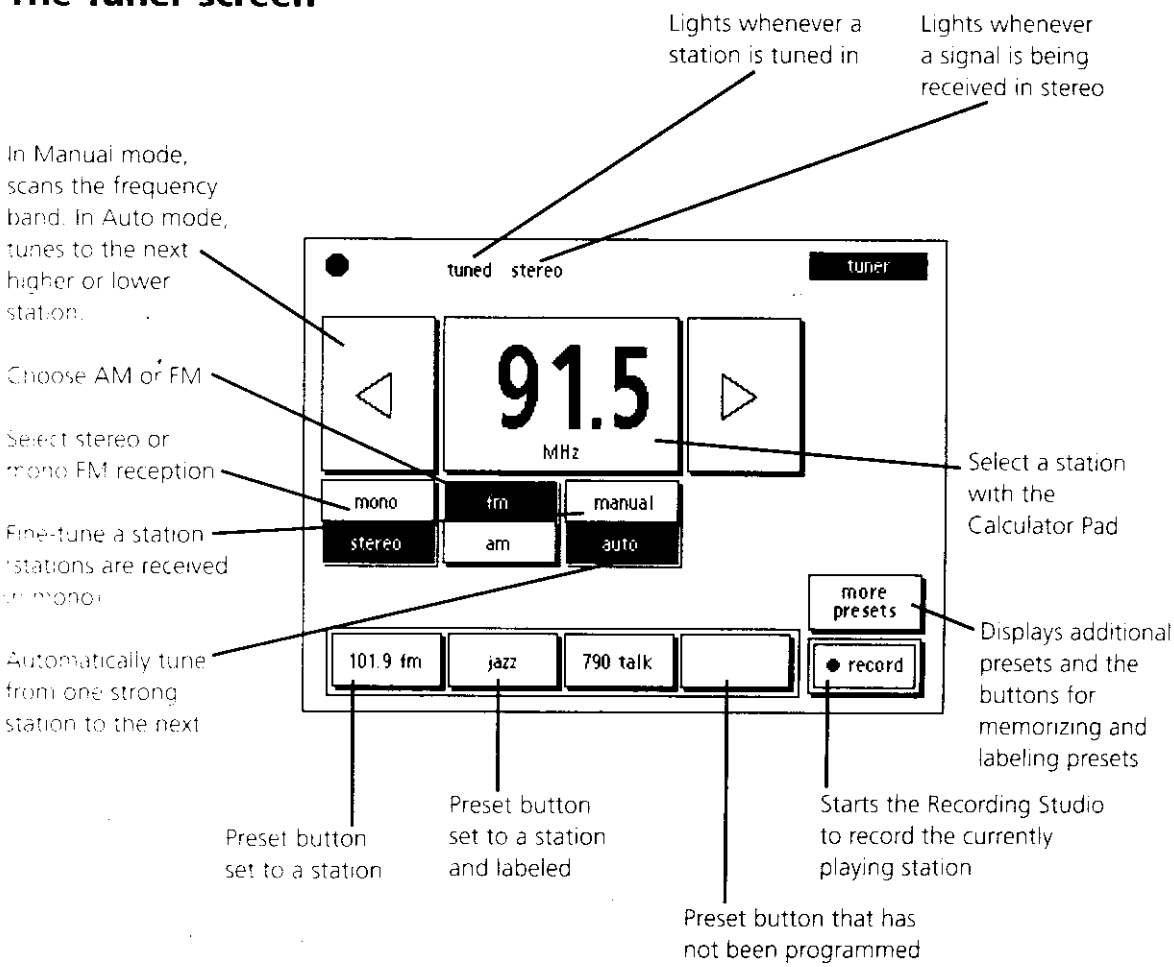
Using the tuner

You can use the Tuner screen to tune and play radio stations, set station presets, and begin recording from a radio station.

To get to the Tuner screen, touch these buttons:

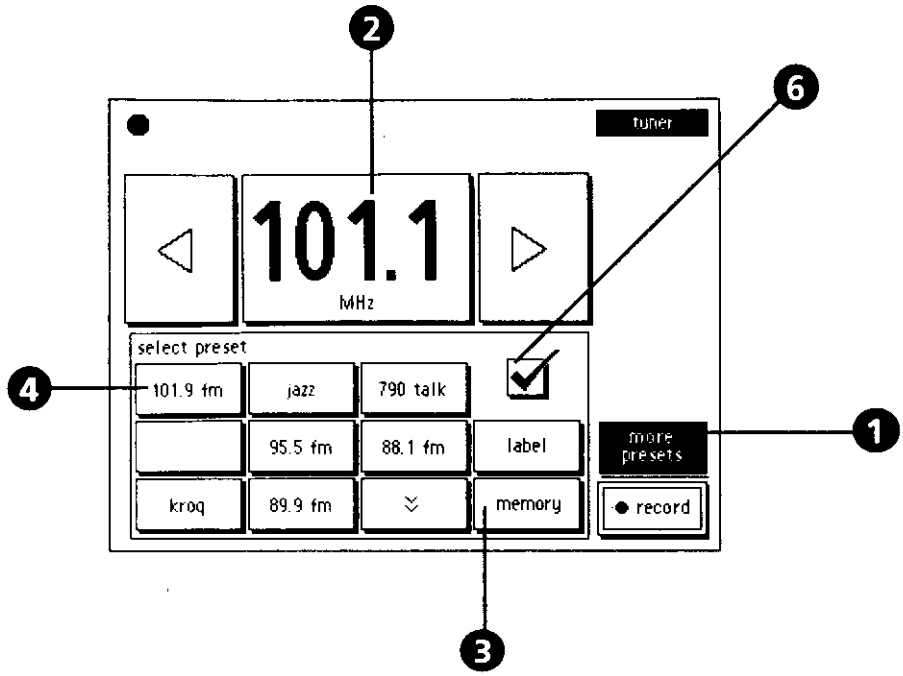


The Tuner screen


Lights whenever a station is tuned in
Lights whenever a signal is being received in stereo
In Manual mode, scans the frequency band. In Auto mode, tunes to the next higher or lower station.
Choose AM or FM
Select stereo or mono FM reception
Fine-tune a station
stations are received
Automatically tune from one strong station to the next
tuned
stereo
tuner
91.5
MHz
mono
fm
manual
stereo
am
auto
more presets
101.9 fm
jazz
790 talk
record
Select a station with the Calculator Pad
Displays additional presets and the buttons for memorizing and labeling presets
Preset button set to a station
Preset button set to a station and labeled
Preset button that has not been programmed
Starts the Recording Studio to record the currently playing station

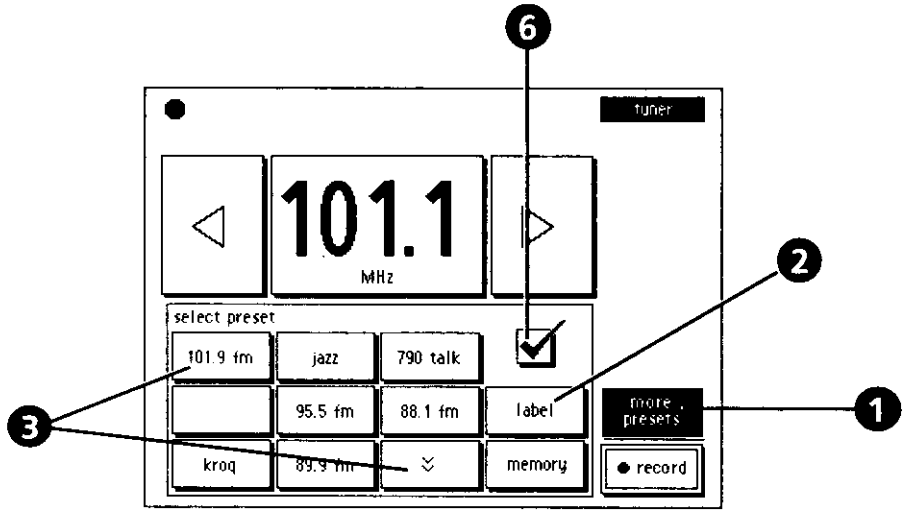
Creating or changing a tuner preset

1. On the Tuner screen, touch the MORE PRESETS button to display the Select Preset pop-up.
2. Tune the frequency you wish to program.
3. Touch the MEMORY button. The Stage 3 Controller temporarily memorizes the frequency.
4. Touch any TUNER PRESET button. The TouchPanel applies the memorized frequency to that button and changes the label to the frequency number. If you would like to change the label, see 'Labeling a tuner preset' next.
5. Repeat steps 2 to 4 for any other stations you want to set.
6. When you are done, thouch the CHECK-MARK to return to the Tuner screen.



Labeling a tuner preset

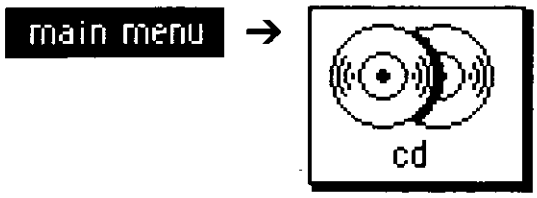
1. On the Tuner screen, touch the MORE PRESETS button to display the Select Preset pop-up.
2. Touch the LABEL button.
3. Touch any TUNER PRESET button you've already preset. (Use the arrow buttons to view more presets). The TouchPanel displays the Calculator Pad.
4. Use the Calculator Pad to create a label.
5. Repeat steps 2 to 4 for any other stations you want to label.
6. When you are done, touch the CHECK-MARK to return to the Tuner screen.



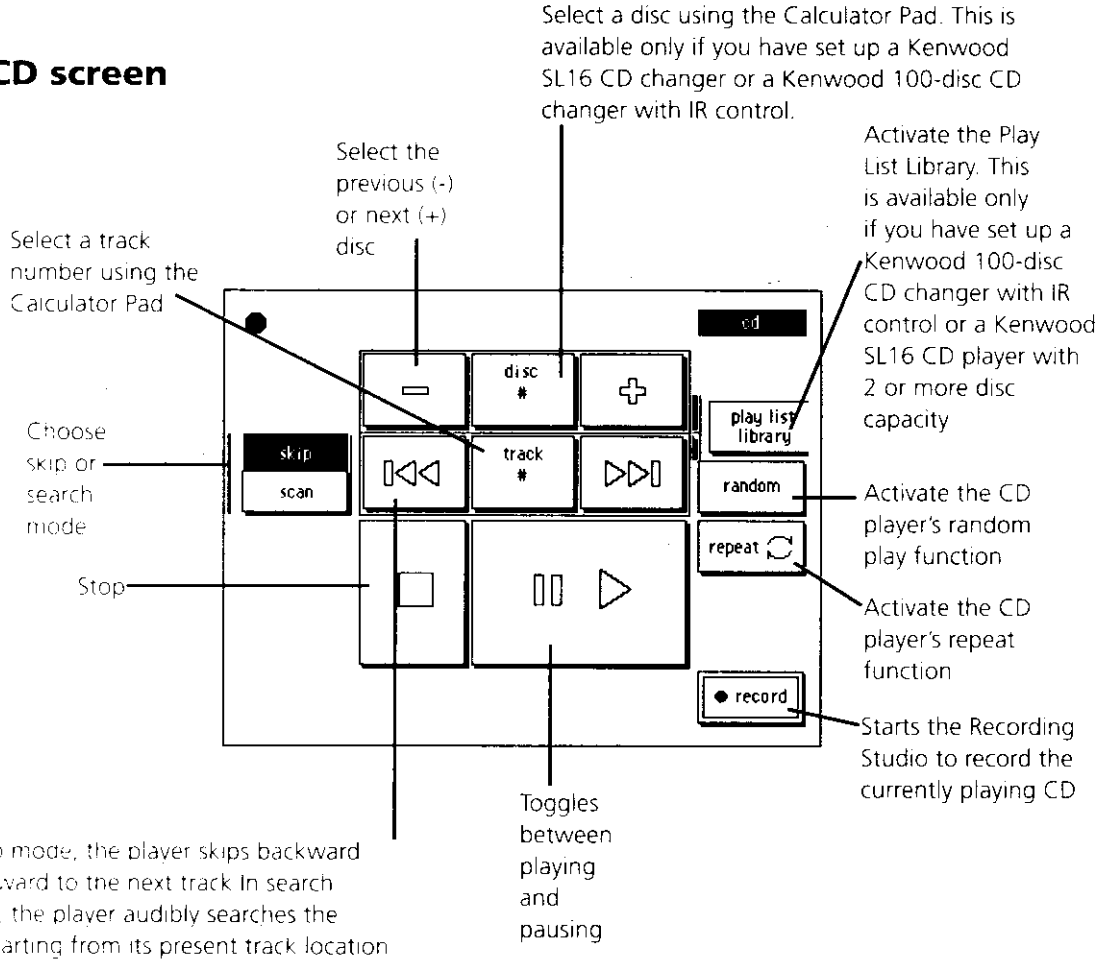
Using a CD player

You can use the CD screen to play CD's, search for specific tracks, and begin recording from a CD.

To get to the CD screen, touch these buttons:



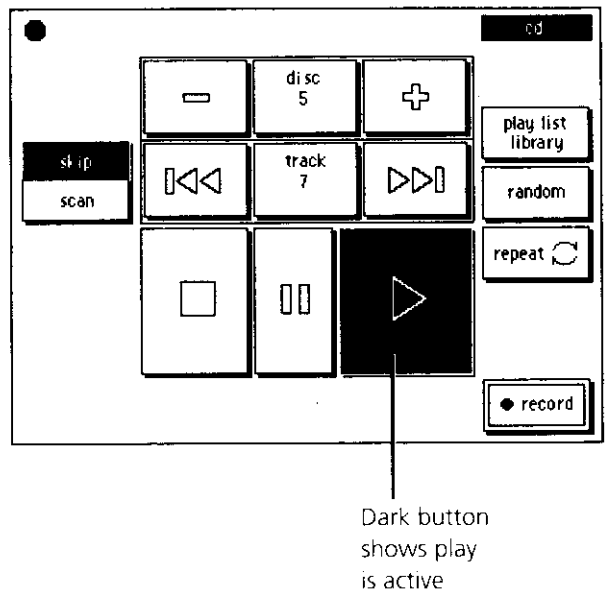
The CD screen


Select a disc using the Calculator Pad. This is available only if you have set up a Kenwood SL16 CD changer or a Kenwood 100-disc CD changer with IR control.
Select the previous (-) or next (+) disc
Activate the Play List Library. This is available only if you have set up a Kenwood 100-disc CD changer with IR control or a Kenwood SL16 CD player with 2 or more disc capacity
Select a track number using the Calculator Pad
Choose skip or search mode
Stop
Activate the CD player's random play function
Activate the CD player's repeat function
Starts the Recording Studio to record the currently playing CD
Toggles between playing and pausing
In skip mode, the player skips backward or forward to the next track. In search mode, the player audibly searches the CD, starting from its present track location
cd
disc #
track #
skip
scan
play list library
random
repeat
record

If you have a Kenwood SL16 CD player

Kenwood SL-16 CD players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players:

- The TouchPanel's DISC and TRACK buttons will display the currently playing disc and track numbers.
- The TouchPanel will show separate PLAY and PAUSE buttons instead of the combination PLAY/PAUSE button.
- The TouchPanel's STOP, PAUSE, and PLAY buttons will remain dark when they're in use (instead of just momentarily turning dark) to let you know which mode is active.



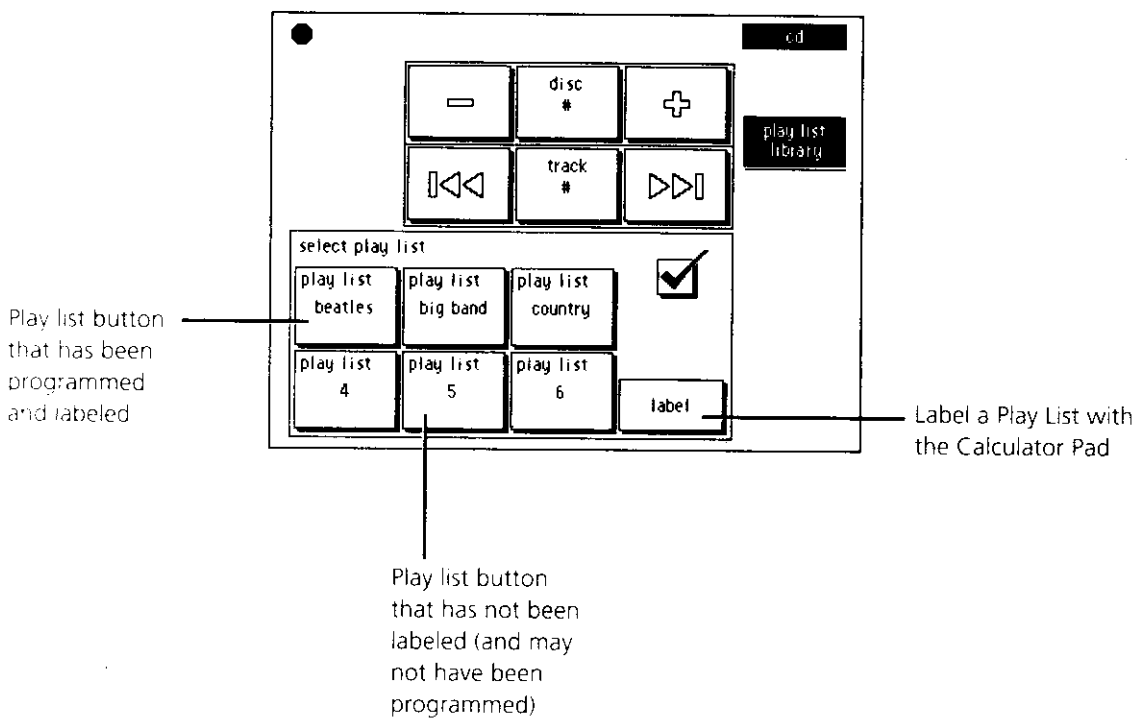
Dark button shows play is active

About CD play lists

If you have a Kenwood SL16 CD player that holds 2 or more discs, or a Kenwood 100-disc CD changer with IR control, you can use the TouchPanel to create and play custom combinations of songs. You can create up to 6 different play lists, each with up to 30 different songs, taken from any combination of CDs. If you have set up one of these CD changers and the PLAY LIST LIBRARY icon does not appear on the Kenwood CD control screen, check to be sure that you properly set up the CD player.

To get to the CD Play List pop-up, touch these buttons:

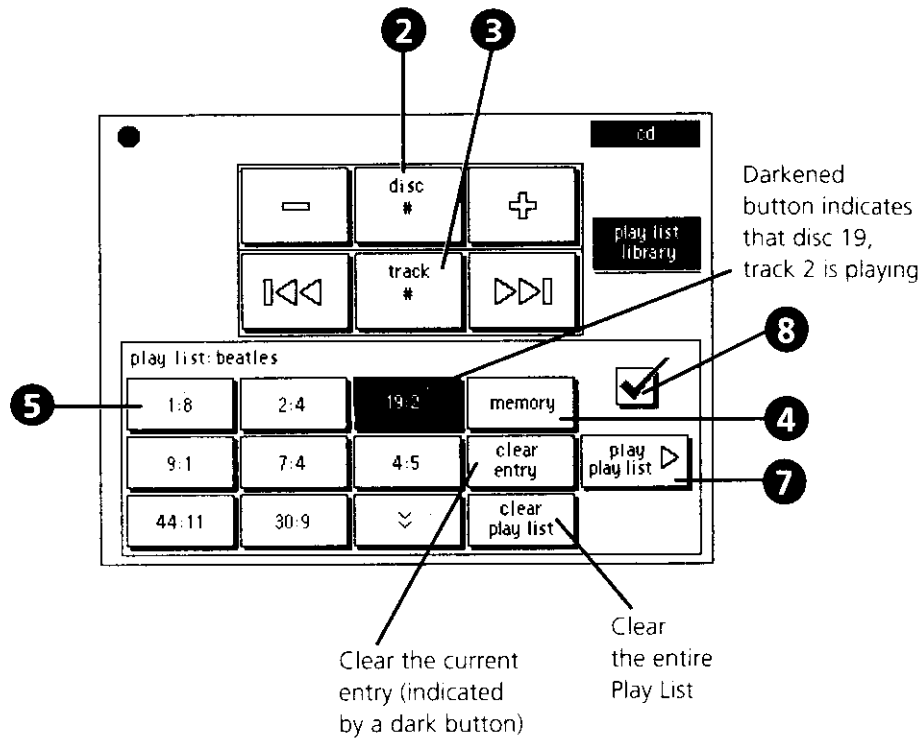
The Play List pop-up


cd
disc #
track #
play list library
select play list
play list beatles
play list big band
play list country
play list 4
play list 5
play list 6
label
Play list button that has been programmed and labeled
Label a Play List with the Calculator Pad
Play list button that has not been labeled (and may not have been programmed)

Touch the CHECK-MARK to exit from the Play List pop-up and return to the CD screen.

Creating a CD play list

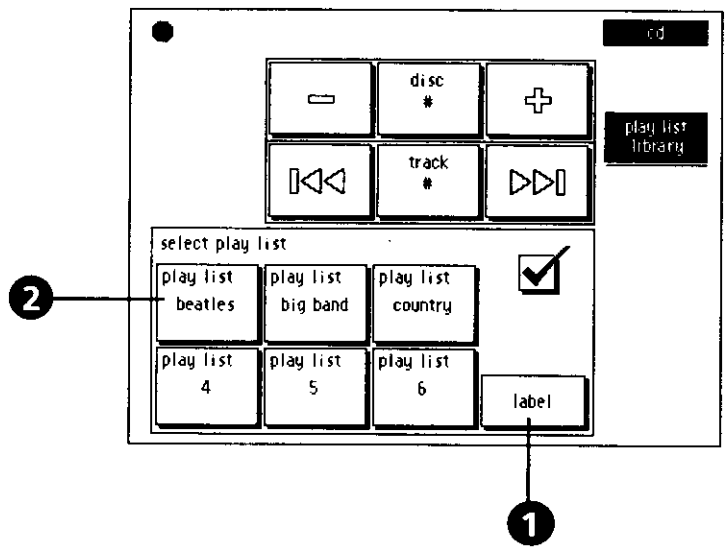
1. On the CD Play List pop-up, touch the button for the Play List you want to create.
2. Touch the DISC # button and enter the disc number using the Calculator Pad that appears.
3. Touch the TRACK # button and enter the track number using the Calculator Pad that appears.
4. Touch the MEMORY button to memorize your disc and track numbers.
5. Touch an ENTRY button. The TouchPanel applies the memorized selections to that button and changes the label to show the disc and track numbers.
6. Repeat steps 2 to 5 for each track you want to add to the Play List.
7. If you want to play the Play List, touch the and PLAY PLAY LIST button.
8. When you're done, touch the CHECK MARK to return to the CD screen.



NOTE: Because your CD Player will play the songs as you program them, you may want to turn it off while you create a Play List.

Labeling a CD play list

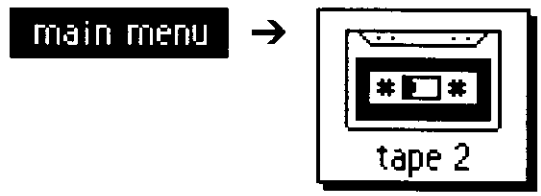
1. On the Select Play List pop-up, touch the LABEL button.
2. Touch the PLAY LIST you would like to label. The TouchPanel displays the Calculator Pad.
3. Enter a number or name for your Play List with the Calculator Pad. Any combination of letters and numbers is fine, up to 8 characters.
4. Touch the ENTER button to accept your label entry.
5. Touch the CHECK-MARK on the Calculator Pad. The label is applied to the PLAY LIST button and you are returned to the CD Play List screen.



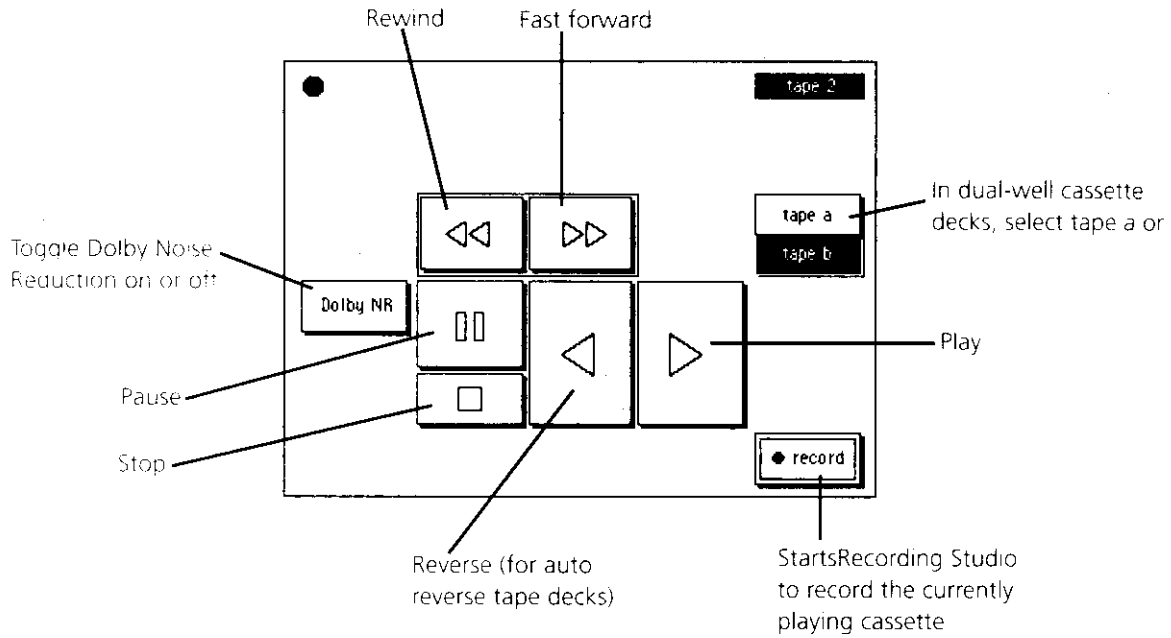
Using a tape deck

You can use the Tape screens (one for each of the up to 2 tape decks you have connected) to play tapes or start recording from a tape.

To get to a Tape screen, touch one of the tape buttons:



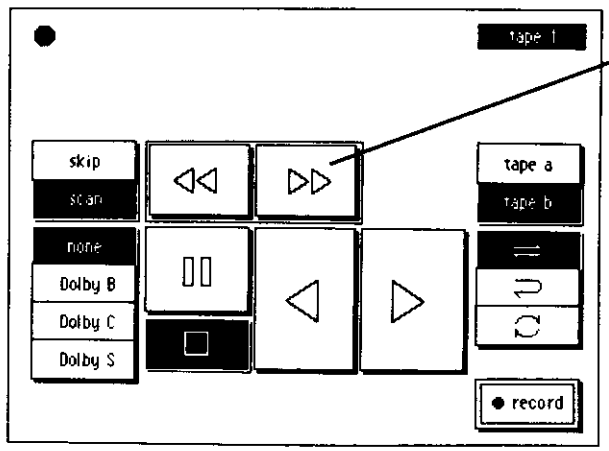
The Tape screen



f you have a Kenwood SL16 cassette deck

Kenwood SL16 cassette decks send information back to the TouchPanel. This means ou'll have additional controls (on Tape-1 only) if you're using one of these decks.

The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.



hoose skip
r scan mode

In skip mode, forwards the tape to the beginning of the next selection

In scan mode, continues to forward the tape until stop or play are selected

Play side a or side b

Play both sides of tape, one time only

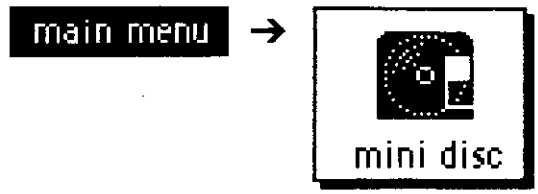
Play both sides of tape, continuously

noose the appropriate ode (or none) (see your ıssette deck user's manual r information on Dolby ɔise Reduction)

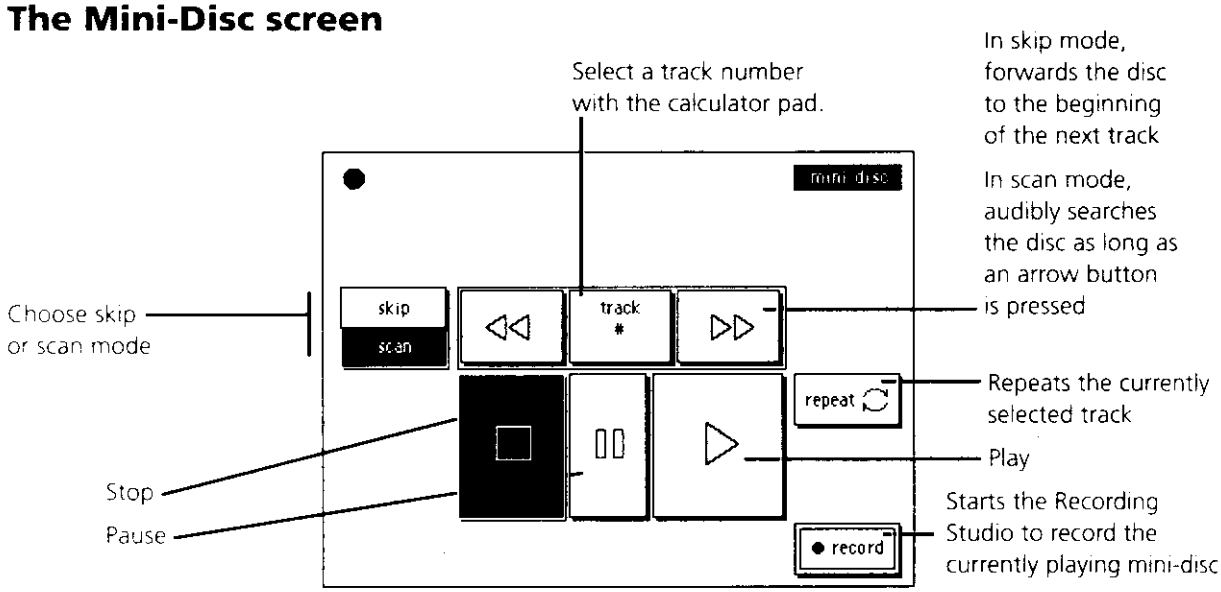
Using a mini-disc player

You can use the Mini-Disc screen to play mini-discs, search for specific tracks, or begin recording from a mini-misc.

To get to the Mini-Disc screen, touch these buttons:



The Mini-Disc screen


Select a track number with the calculator pad.
In skip mode, forwards the disc to the beginning of the next track
In scan mode, audibly searches the disc as long as an arrow button is pressed
Choose skip or scan mode
skip
scan
track #
repeat
Repeats the currently selected track
Play
Stop
Pause
record
Starts the Recording Studio to record the currently playing mini-disc

If you have a Kenwood SL16 mini-disc player

Kenwood SL16 mini-disc players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players.

- The TouchPanel's TRACK button will display the currently playing track number.
- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

You can use a record player, personal stereo, or graphic equalizer with your system, even though they can't be controlled by the TouchPanel. To set up this type of unit, see *Setting up your KC-Z1 Controller.* Here's how to use such a device once you have it set-up:

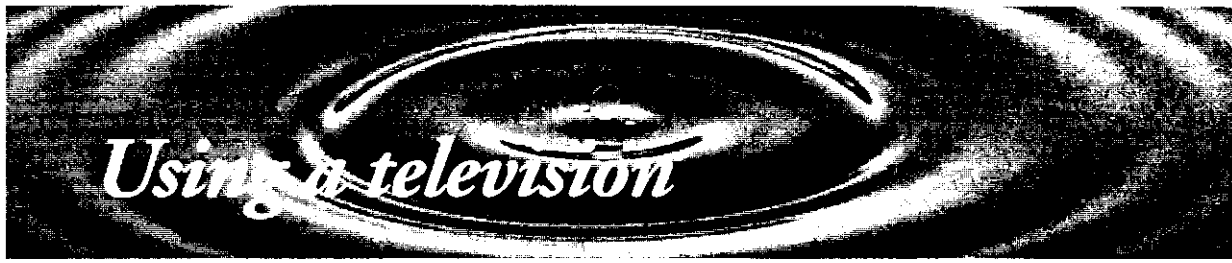
To use a record player or personal stereo

1. Turn the component power on.
2. Touch the COMPONENT icon from the MAIN menu.
3. Begin play using the component's controls.
4. Modify sound settings from the Sound menu if you wish.

To use a graphic equalizer

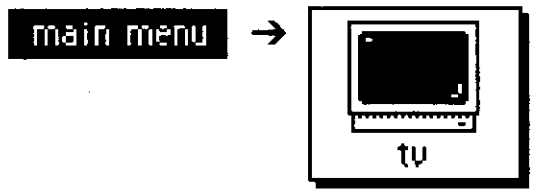
1. Turn the graphic equalizer power on.
2. Use the graphic equalizer's controls according to that component's instructions.

The graphic equalizer will not appear as a component icon on the TouchPanel screen, since it is not a sound-producing component.

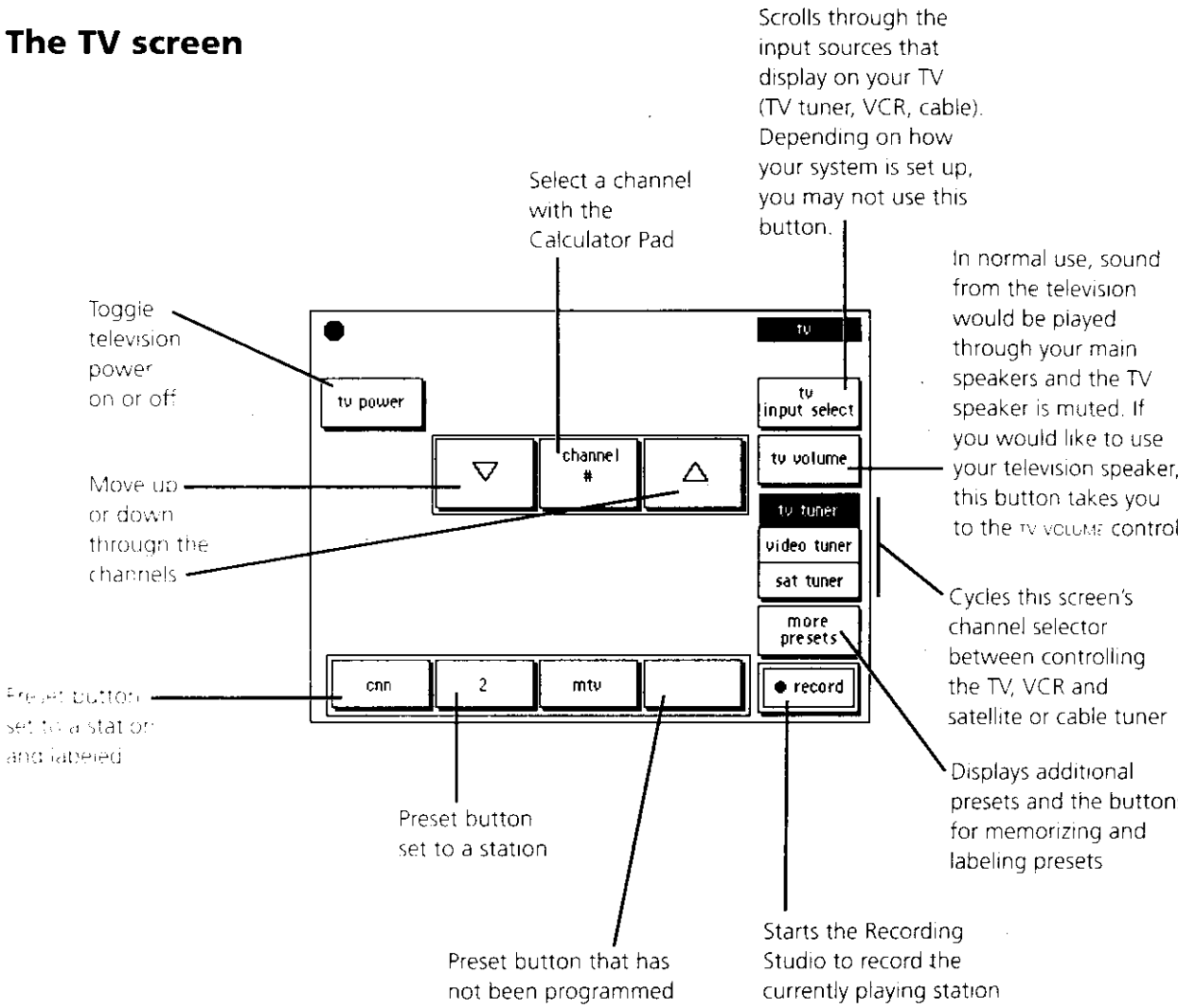


You can use the TV screen to select TV stations, set up channel presets, and begin recording from a TV station.

To get to the TV screen, touch these buttons:

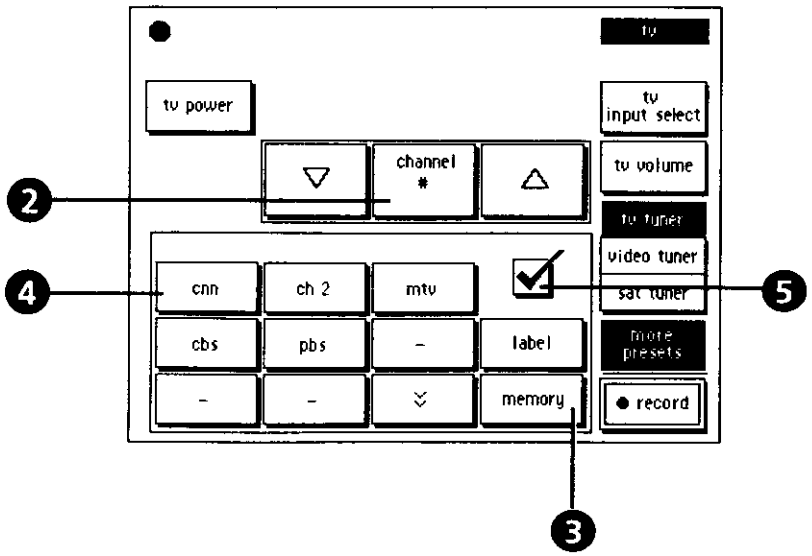


The TV screen


Scrolls through the input sources that display on your TV (TV tuner, VCR, cable). Depending on how your system is set up, you may not use this button.
Select a channel with the Calculator Pad
In normal use, sound from the television would be played through your main speakers and the TV speaker is muted. If you would like to use your television speaker, this button takes you to the TV VOLUME control.
Toggle television power on or off
Move up or down through the channels
Cycles this screen's channel selector between controlling the TV, VCR and satellite or cable tuner
Displays additional presets and the buttons for memorizing and labeling presets
Preset button set to a station and labeled
Preset button set to a station
Preset button that has not been programmed
Starts the Recording Studio to record the currently playing station
tv
tv power
tv input select
channel #
tv volume
tv tuner
video tuner
sat tuner
more presets
cnn
2
mtv
record

Creating or changing a channel preset

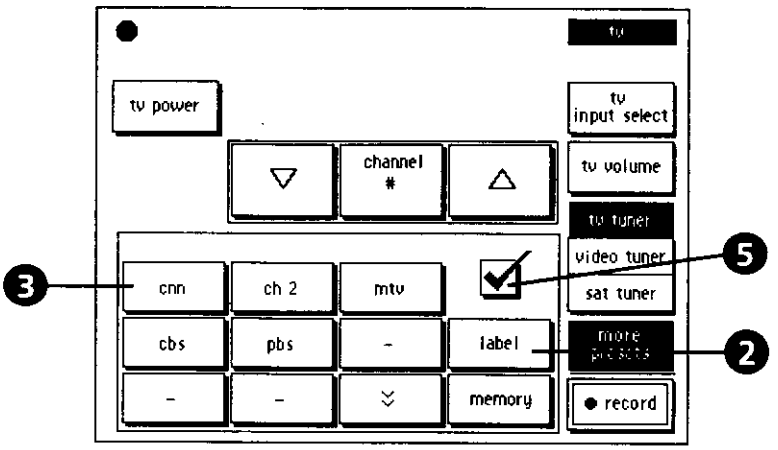
1. On the TV screen (on the TouchPanel), touch the MORE PRESETS button.
2. Tune the channel you wish to program
3. Touch the MEMORY button. The Stage 3 Controller temporarily memorizes the channel.
4. Touch any CHANNEL PRESET button. The TouchPanel applies the memorized frequency to that button and changes the label to the channel number.
5. When you are done, touch the CHECK-MARK to return to the TV screen.

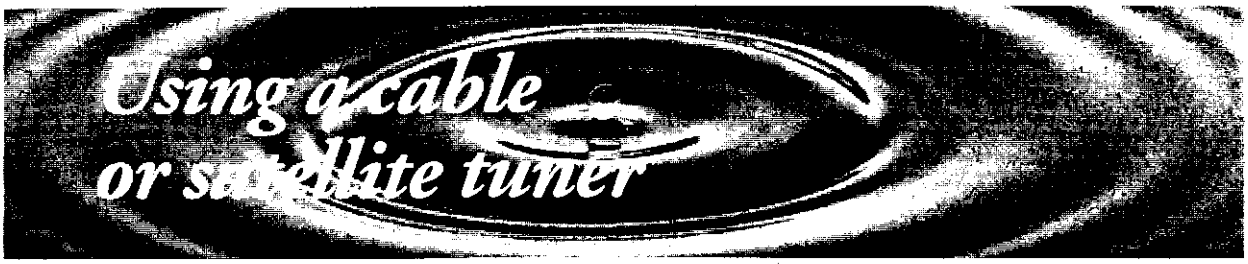


Labeling a channel preset

Instead of the channel number, you can label Preset buttons to display the channel name (such as 'CBS' or 'MTV').

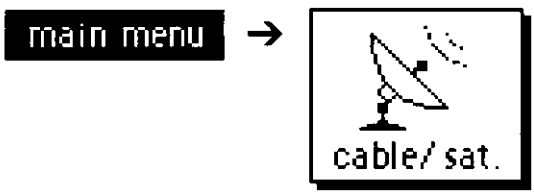
1. On the TV screen (on the TouchPanel), touch the MORE PRESETS button.
2. Touch the LABEL button.
3. Touch any CHANNEL PRESET button. (Use the ARROW buttons to view more Presets). The TouchPanel displays the Calculator Pad.
4. Enter the desired label with the Calculator Pad. (any combination of letters or numbers, up to 8 characters long).
5. When you are done, touch the check-mark to return to the TV screen.





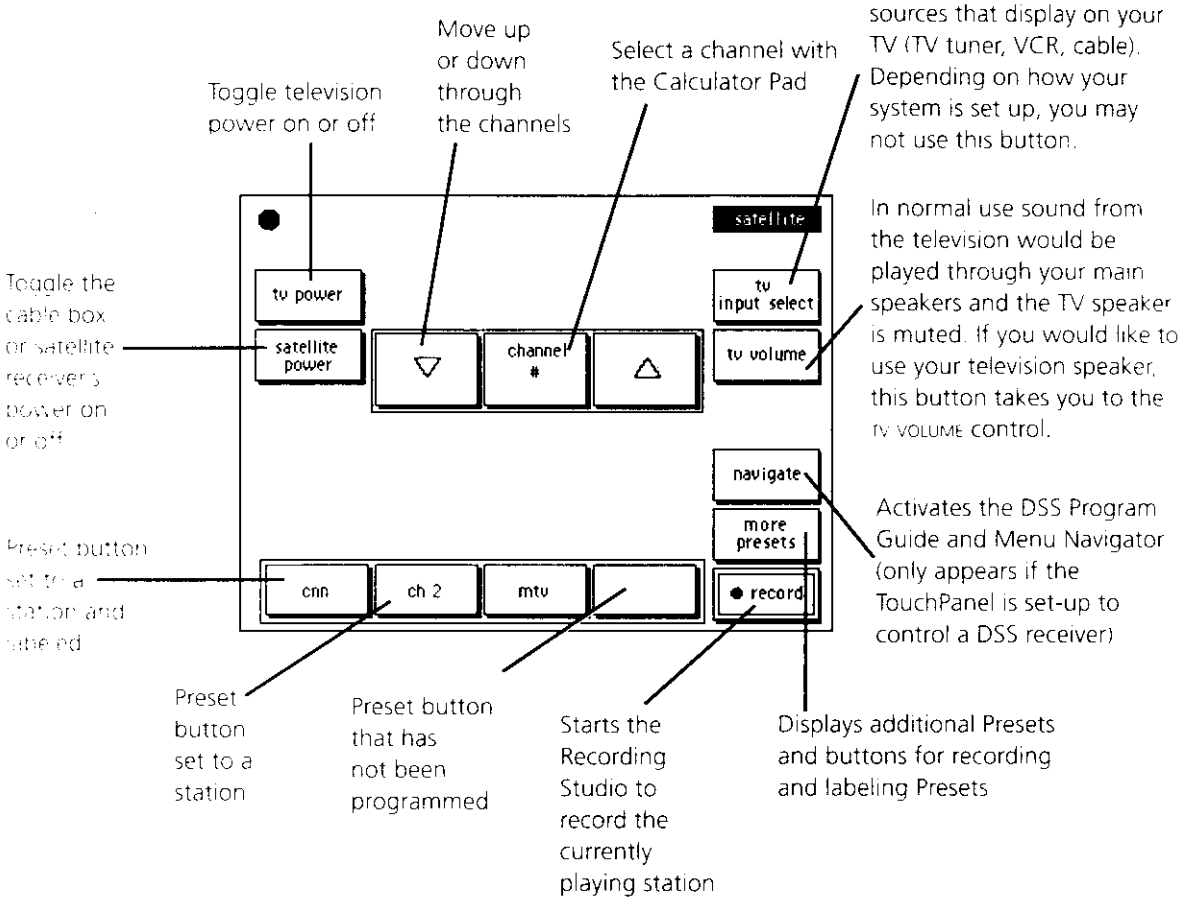
You can use the cable or satellite screens to select a cable or satellite TV station, set up channel Presets, or begin recording from a cable or satellite tuner.

To get to the CABLE/SATELLITE screen, touch these buttons:



The Satellite screen

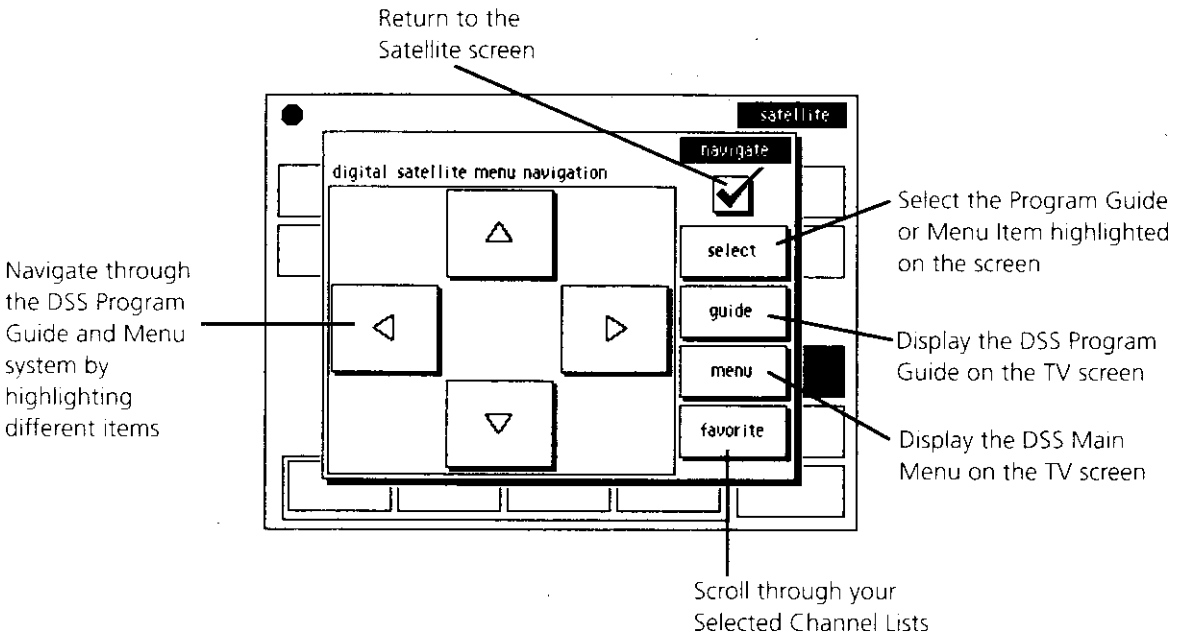
The Cable screen is identical.


Toggle television power on or off
Move up or down through the channels
Select a channel with the Calculator Pad
Scrolls through the input sources that display on your TV (TV tuner, VCR, cable). Depending on how your system is set up, you may not use this button.
satellite
tv power
satellite power
channel #
tv input select
tv volume
In normal use sound from the television would be played through your main speakers and the TV speaker is muted. If you would like to use your television speaker, this button takes you to the TV VOLUME control.
navigate
more presets
record
cnn
ch 2
mtv
Activates the DSS Program Guide and Menu Navigator (only appears if the TouchPanel is set-up to control a DSS receiver)
Preset button set to a station and labeled
Preset button set to a station
Preset button that has not been programmed
Starts the Recording Studio to record the currently playing station
Displays additional Presets and buttons for recording and labeling Presets

About presets

The channel presets that appear on the cable or satellite screens will be the same ones that you have set for your TV and VCR. To preset stations for your satellite system, use your DSS receiver's Favorite Channel List function or your satellite receiver's Preset Station Setting function.

Using the DSS program guide navigator screen


Return to the Satellite screen
satellite
navigate
digital satellite menu navigation
select
guide
menu
favorite
Navigate through the DSS Program Guide and Menu system by highlighting different items
Select the Program Guide or Menu Item highlighted on the screen
Display the DSS Program Guide on the TV screen
Display the DSS Main Menu on the TV screen
Scroll through your Selected Channel Lists

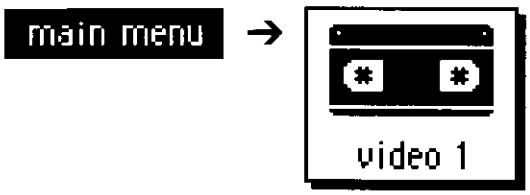
About channels above 255

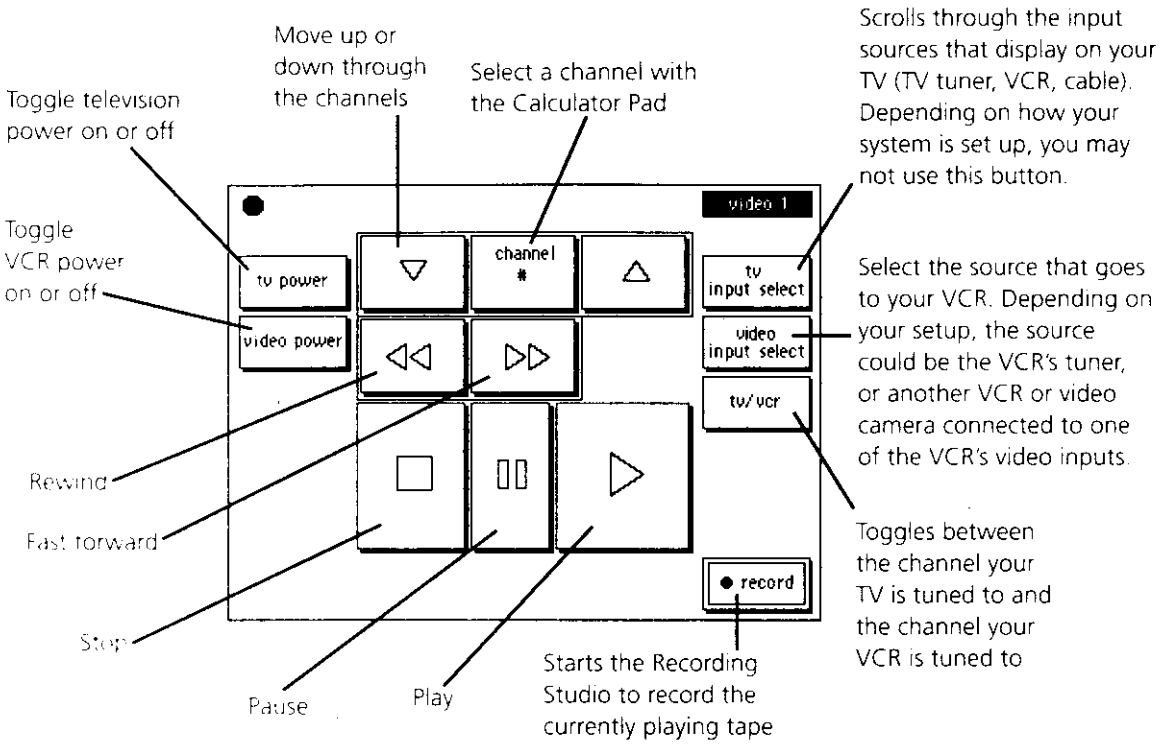
You cannot enter a channel number higher than 255 with the Calculator Pad. To select channels above 255, use your DSS receiver's Program Guide or your satellite receiver's Direct Channel Access function. You can also select channels higher than 255 with the TouchPanel's CHANNEL UP/DOWN arrow buttons.

Using a VCR

You can use the Video screens (one for each of the VCRs you have connected) to play tapes or start recording from a tape.

To get to a Video screen, touch one of the video buttons:




Move up or down through the channels
Select a channel with the Calculator Pad
Scrolls through the input sources that display on your TV (TV tuner, VCR, cable). Depending on how your system is set up, you may not use this button.
Toggle television power on or off
Toggle VCR power on or off
video 1
tv power
video power
channel #
tv input select
video input select
tv/vcr
record
Select the source that goes to your VCR. Depending on your setup, the source could be the VCR's tuner, or another VCR or video camera connected to one of the VCR's video inputs.
Rewind
Fast forward
Stop
Pause
Play
Starts the Recording Studio to record the currently playing tape
Toggles between the channel your TV is tuned to and the channel your VCR is tuned to

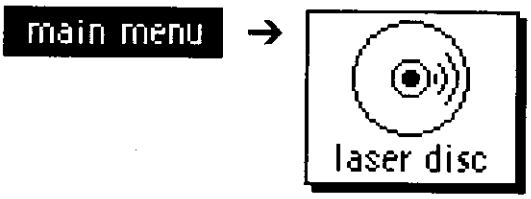
About recording

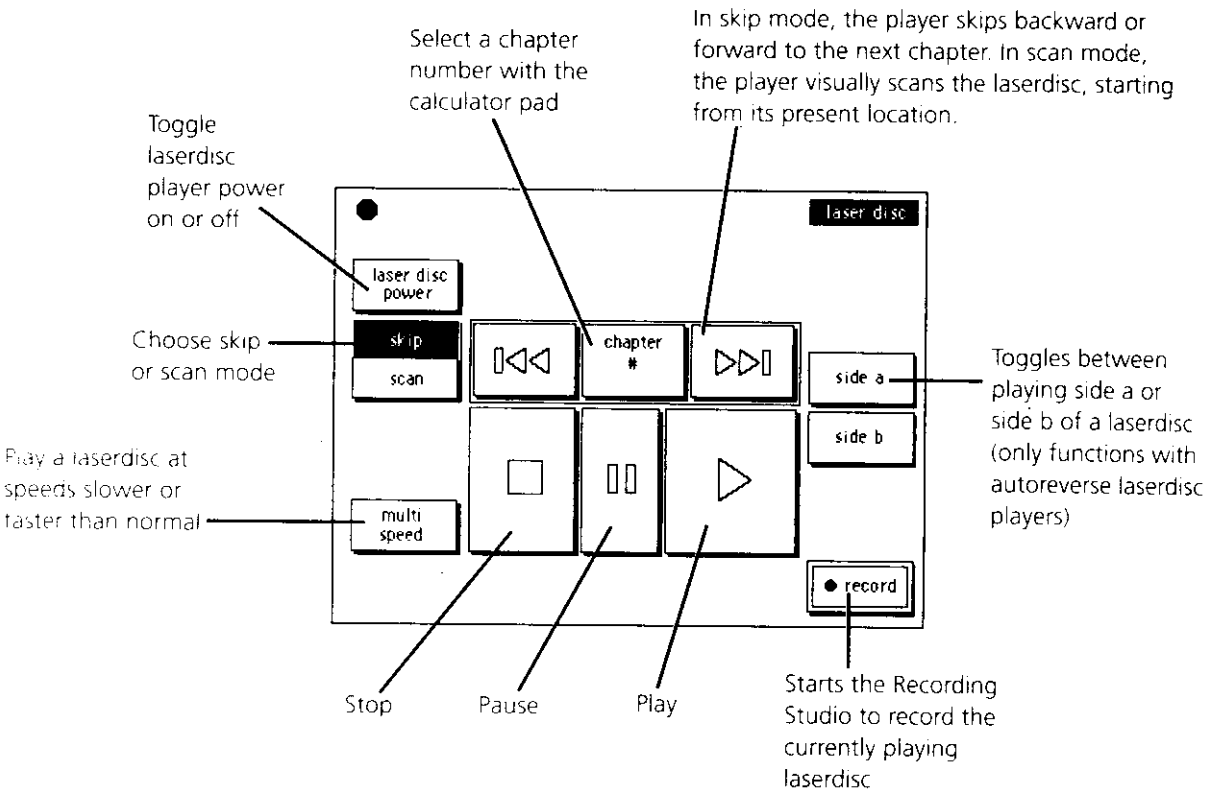
For instructions on recording to a VCR, see 'Recording' on page 46.

Using a laserdisc player

You can use the Laserdisc screen to play laserdiscs or start recording from a laserdisc.

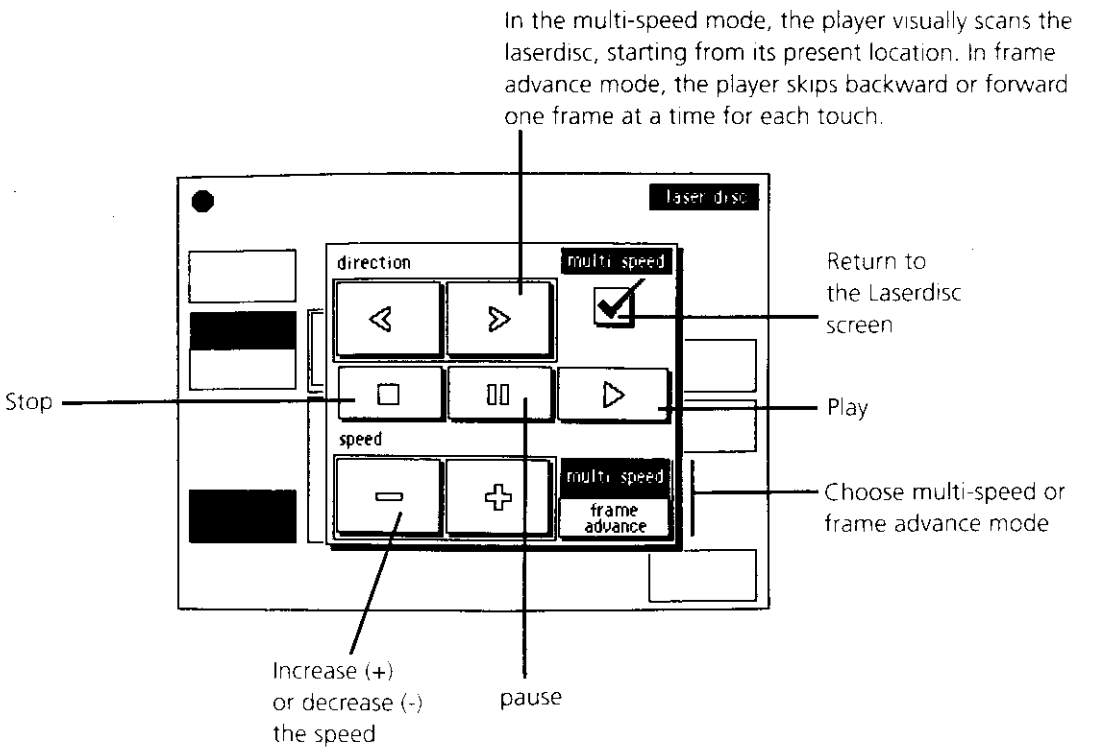
To get to the Laserdisc screen, touch these buttons:

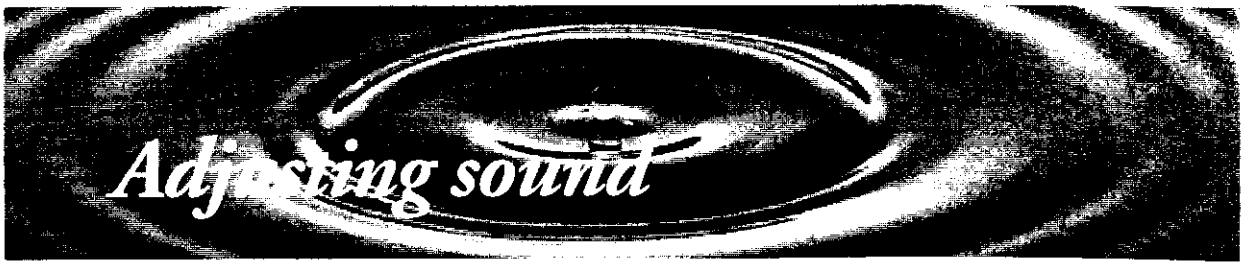



Select a chapter number with the calculator pad
In skip mode, the player skips backward or forward to the next chapter. In scan mode, the player visually scans the laserdisc, starting from its present location.
Toggle laserdisc player power on or off
laser disc
laser disc power
Choose skip or scan mode
skip
scan
chapter #
side a
side b
Toggles between playing side a or side b of a laserdisc (only functions with autoreverse laserdisc players)
Play a laserdisc at speeds slower or faster than normal
multi speed
record
Stop
Pause
Play
Starts the Recording Studio to record the currently playing laserdisc

Using the laserdisc multi-speed modes

To use the multi-speed modes, you'll need either a special laser disc (one recorded in the CAV format) or a special laser disc player (one that supports digital special effects).


In the multi-speed mode, the player visually scans the laserdisc, starting from its present location. In frame advance mode, the player skips backward or forward one frame at a time for each touch.
laser disc
direction
multi speed
Return to the Laserdisc screen
Stop
Play
speed
multi speed
frame advance
Choose multi-speed or frame advance mode
Increase (+) or decrease (-) the speed
pause



To view or change the current settings, touch the SOUND button when you're using any component. When you're finished making changes, touching the CHECK-MARK will return you to the controls of the component you were using.

From the Sound menu you can:

- Select an audio mode: Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby Pro Logic, or Dolby Digital (AC-3).
- Add sound processing: THX Cinema (for more accurate film sound) and DSP Logic (for simulated room sound).
- Adjust Bass and Treble.
- Select Midnight mode for quiet listening.
- Control speaker delay and sound level.
- Reset sound settings to their default value.

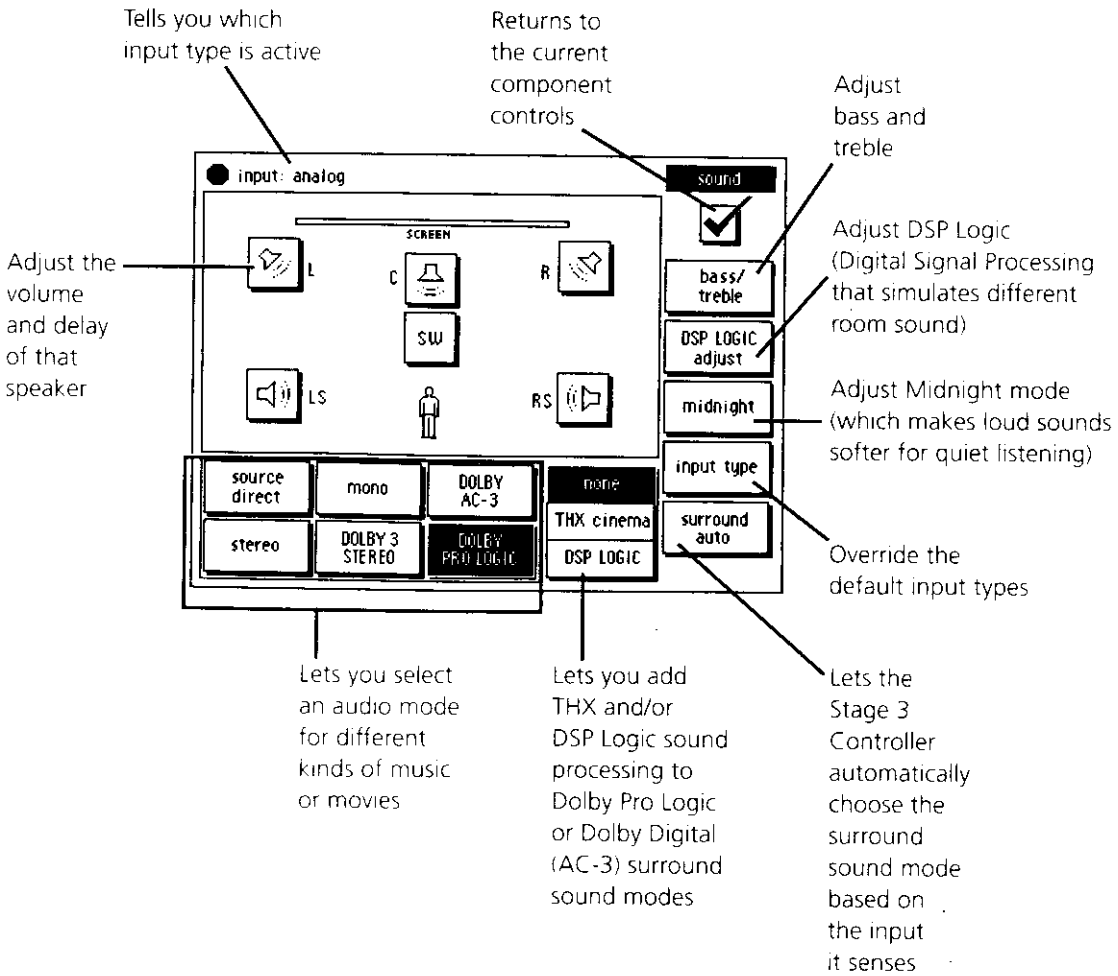
Saving your settings

Any changes you make from the Sound menu, plus the settings for the current component, can be saved as a System Preset. See the chapter 'Using system presets' later in this booklet.

Accessing sound controls

To get to the Sound screen, touch this button:

The following sound controls are available:


Tells you which input type is active
Returns to the current component controls
Adjust bass and treble
Adjust DSP Logic (Digital Signal Processing that simulates different room sound)
Adjust Midnight mode (which makes loud sounds softer for quiet listening)
Override the default input types
Adjust the volume and delay of that speaker
input: analog
sound
SCREEN
L
C
R
SW
LS
RS
bass/ treble
DSP LOGIC adjust
midnight
input type
surround auto
source direct
mono
DOLBY AC-3
stereo
DOLBY 3 STEREO
DOLBY PRO LOGIC
none
THX cinema
DSP LOGIC
Lets you select an audio mode for different kinds of music or movies
Lets you add THX and/or DSP Logic sound processing to Dolby Pro Logic or Dolby Digital (AC-3) surround sound modes
Lets the Stage 3 Controller automatically choose the surround sound mode based on the input it senses

About Surround Auto

If SURROUND AUTO is ON, the Stage3 Controller will automatically choose the best input type from among those that are connected to the active source. The priority is: RF, Digital Coaxial, Digital Optical, Analog.

About the audio modes

You can choose from six audio modes, including three music modes (source direct, mono, and stereo) and three surround-sound modes (Dolby 3 Stereo, Dolby Surround Pro Logic, and Dolby Digital [AC-3]).

When you select an Audio Mode, the TouchPanel uses darkened icons to show you which speakers are producing sound in that mode (if your system includes a subwoofer it will remain active in all audio modes). For example, in Stereo mode, the left and right speaker icons will be darkened, and so will the subwoofer icon if you have a subwoofer installed. In Dolby Digital (AC-3) mode, the left, center, right, surround, and subwoofer speaker icons would be darkened.

Source Direct

Plays the audio source in stereo, bypassing all of the Stage 3 Controller's digital, surround, and tone control circuitry. This allows you to listen to a stereo recording in the purest possible way. (Source Direct operates only with components connected using the Stage 3 Controller's analog inputs).

Stereo

Plays the audio source in stereo using only the left and right speakers and applies any adjustments you've made on the Bass and Treble Menu.

Mono

Plays the audio source in monaural using only the center speaker only. If your system does not have a center speaker, the monaural sound will come through the left and right speakers.

Dolby 3 Stereo

Plays the audio source through the left, center and right speakers. For music, this retains a stereo sound, with improved imaging and definition, especially for multiple listeners. For home theater, this mode is only useful if you are not using surround speakers in your system.

Dolby Pro Logic

Plays the audio source through the left, center, right and surround speakers, using Dolby Pro Logic decoding for surround sound. This is the standard setting for Dolby Surround-encoded video tapes, laser discs, and TV broadcasts.

Dolby Digital (AC-3)

Plays the audio source through the left, center, right and surround speakers, using Dolby Digital (AC-3) decoding for surround sound. This is the setting to be used on newer laser discs and other sources that are labeled 'Dolby Digital (AC-3)'.

Surround Auto

If the input is CD, mini disc, tuner, phono or tape, the Controller automatically selects stereo mode. If the input is TV, laser disc, cable/sattelite or video, the Controller selects Dolby Surround Pro Logic mode. If the source is recorded in Dolby Digital (AC-3), the Controller selects Dolby Digital (AC-3) mode. (You can still select any surround mode manually).

What you can change

The audio modes you can select depend on the speakers you have installed in your system.

If your system has	You can select
Left and Right speakers	Source Direct, Stereo, Mono, Dolby AC-3
Left, Center and Right speakers	Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby AC-3
Left, Right and Surround speakers	Source Direct, Stereo, Mono, Dolby Surround Pro Logic, Dolby AC-3
Left, Center, Right and Surround speakers	Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby Surround Pro Logic, Dolby AC-3

NOTE: Dolby Digital (AC-3) sources will play with any speaker configuration. If your system lacks surround or center speakers, the Stage 3 Controller will blend the information for those channels into the left and right speakers.

Adding sound processing

The Stage 3 Controller offers 3 choices for sound processing: THX Cinema, DSP Logic, and none:

THX Cinema

Because a film's soundtrack is meant to be heard in a large theater with dozens of speakers, movies can sound much different when played in a typical room at home. THX Cinema sound processing is special circuitry developed by Lucasfilm, LTD, that corrects this problem. THX Cinema adjusts tone, compensates for how our ears hear directional sound, and creates a more spacious, enveloping surround-sound environment. The result is sound that matches as closely as possible the sound created by the movie's director and sound technicians.

Keep in mind these points about THX Cinema processing:

- THX Cinema processing can only adjust sound that has already been decoded by a surround-sound decoder, and so it is only available when the Controller is in Dolby Digital (AC-3) or Dolby Surround Pro Logic mode.
- Use THX Cinema processing for films marked Dolby Digital (AC-3), Dolby Surround, or Dolby Stereo (a term used to denote Dolby Surround that you may find on older laserdiscs and videotapes).
- Activating the THX Cinema mode automatically resets the bass and treble controls to their flat settings. Once you activate THX Cinema mode, you can boost or cut the bass and treble settings as you like. When you exit THX Cinema mode, the bass and treble settings will return to the values they were at before you selected THX Cinema.

DSP Logic

Combines the surround sound of Dolby Digital (Dolby AC-3) and Dolby Surround Pro Logic with proprietary Kenwood Digital Signal Processing. This lets you personalize the listening environment to simulate the way films (or music) would sound in different rooms, from the intimate environment of a jazz club to the spaciousness of a large theater.

- You can use DSP Logic processing for any Dolby Digital (AC-3), Dolby Surround or stereo music programs.
- DSP Logic processing is only available in the Dolby Digital (AC-3) and Dolby Surround Pro Logic modes.

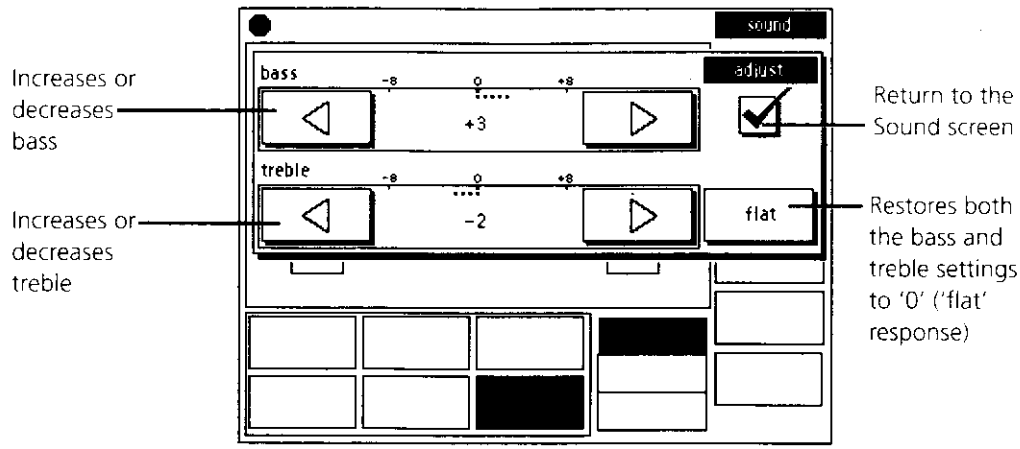
For instructions on how to adjust the DSP Logic settings, see 'Adjusting DSP Logic' on page 42.

None

Turns off both THX Cinema and DSP Logic processing.

Adjusting bass and treble

To get to the Bass/Treble Adjust screen, touch these buttons:



Any changes you make on this screen are erased (and the settings reset to '0') when you:

- Change input sources
- Activate the Surround Auto mode
- Put the Controller in Standby mode (shut-down the system)

You can save changes in bass and treble level as part of a System Preset.

Adjusting DSP Logic

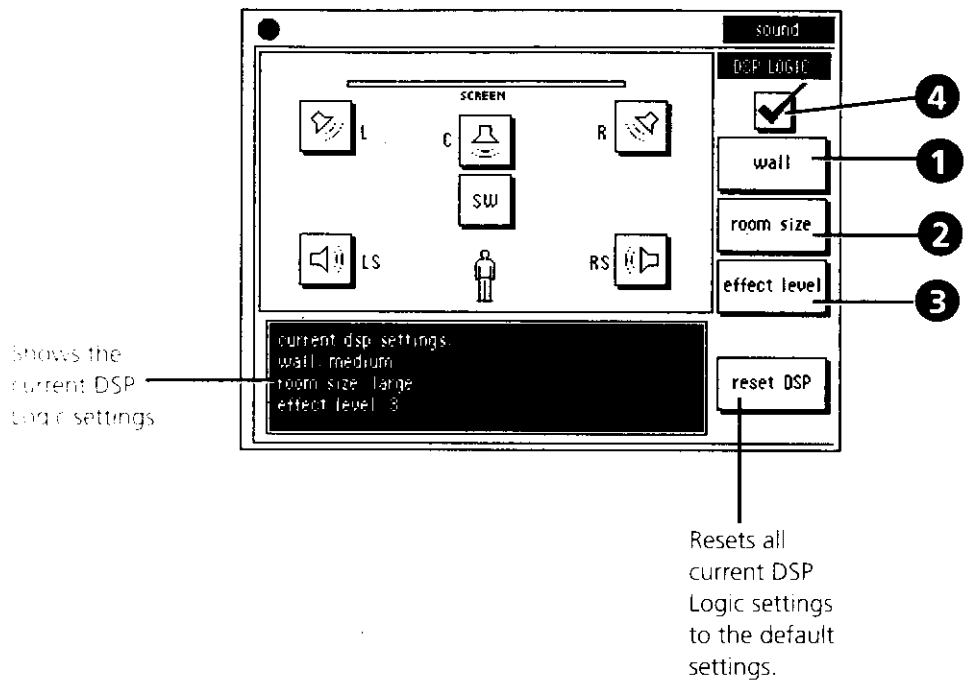
To get to the DSP LOGIC screen, touch these buttons:

1. Touch the WALL button. You can select from 3 different wall textures. SOFT makes the simulated walls absorb more sound (such as in a room full of people), while HARD makes them reflect more sound (like a theater that's nearly empty).

2. Touch the ROOM SIZE button. You can select from 3 different room sizes. The sizes refer to public spaces, so SMALL might be used to simulate a more intimate club, while LARGE could be used to simulate a large theater.

3. Touch the EFFECT LEVEL button. You can change the effect level from 1 (very little effect) to 5 (maximum effect).

4. When you are done, touch the CHECK-MARK to return to the Setup screen.

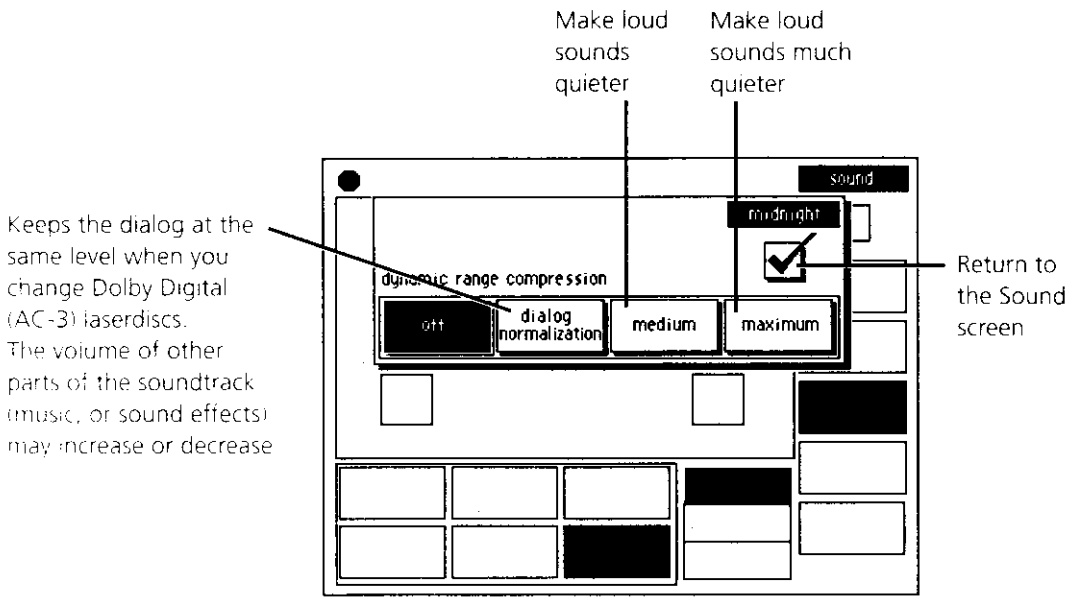


Adjusting for quiet listening

Midnight mode dynamic range compression makes the quiet and loud parts of a movie or music closer to the same level. This lets you turn up the sound so you can hear the quiet parts without being surprised by a loud part.

NOTE: Midnight mode only works with Dolby Digital (AC-3) programs that have been specially encoded.

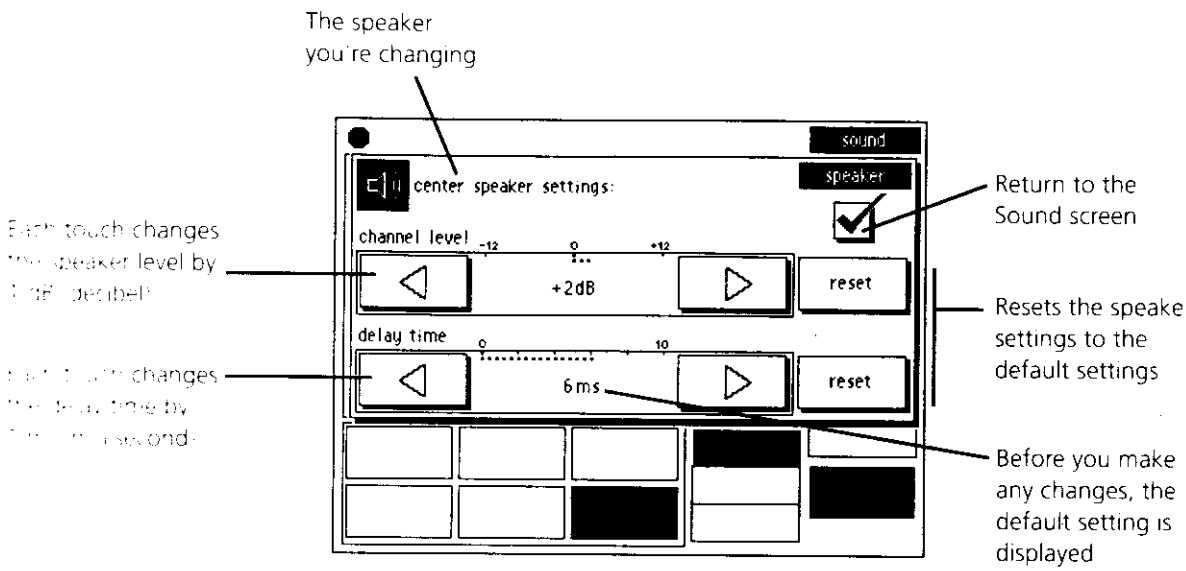
To get to the Midnight screen, touch these butons:


Make loud sounds quieter
Make loud sounds much quieter
Keeps the dialog at the same level when you change Dolby Digital (AC-3) laserdiscs. The volume of other parts of the soundtrack (music, or sound effects) may increase or decrease
Return to the Sound screen
sound
midnight
dynamic range compression
off
dialog normalization
medium
maximum

Adjusting speaker delay and level

When you set up your system, you set the default settings for Delay Time by setting the distance between all of your speakers. You can, if you want, change the delay time and level.

To get to the Speaker screen, touch these buttons:



Any changes you make on this screen are erased (and the settings reset to their default settings) when you:

- Change input sources
- Activate the Surround Auto mode
- Put the Controller in Standby Mode (shut-down the system)

You can save changes in speaker level and delay time as part of a System Preset.

For normal use we suggest that you allow the Stage 3 Controller to select the optimum input type for you using the system's default settings.

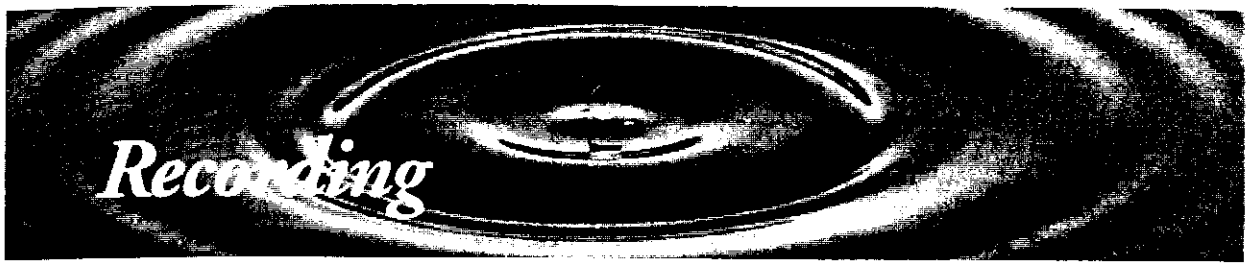
If you are an expert user and would like to make input type changes the following input types are available, depending on the connections made to your source components:

1. Make sure you have turned off Surround Auto (see page 44).
2. If you are not on the Input Type screen, touch these buttons:

3. Depending on how you have connected your components, select from the following input types:
   - RF (for laserdisc players with Dolby Digital [AC-3] RF outputs)
   - Digital Coaxial (for CD players, laserdisc players, mini disc players and satellite receivers with coaxial digital outputs)
   - Digital Optical (for CD players, laserdisc players, mini disc players and satellite receivers with TOS-link optical digital outputs)
   - Analog (for all components that have standard RCA-type analog outputs).
4. Touch the CHECK-MARK to return to the Sound screen.

About Digital Recording

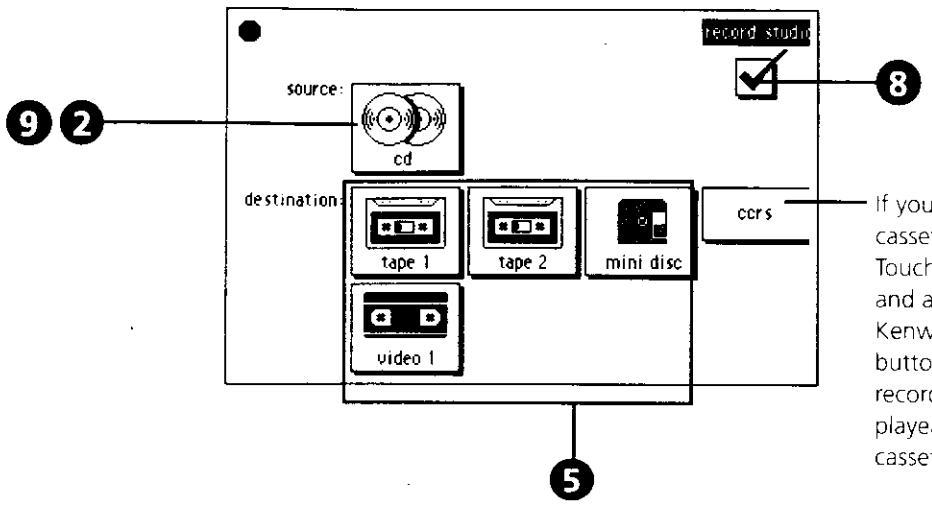
If you have activated the Digital Coaxial or Optical Input for a component, it cannot be used as a source for recording (except to make a digital recording onto a mini disc).



The Recording Studio function allows you to select a source component to record from, and a destination component to record onto, and lets you control them both from the TouchPanel.

General instructions for the Recording Studio

1. To activate the Record Studio, press the RECORD button in the lower right corner of almost any TouchPanel screen. The component you're listening to becomes the source component for the recording. The TouchPanel then displays the Record Studio screen.



If you have a Kenwood cassette deck with One-Touch Recording (CCRS) and a compatible SL16 Kenwood CD player, this button will begin automatic recording from the CD player to the tape 1 cassette deck

2. Touch the SOURCE COMPONENT icon on the Record Studio screen.

3. Prepare the source for recording by cueing up the selection you wish to record (the procedure for this will depend upon the specific component you have).

4. Touch the RECORD icon in the lower right corner of the source component's screen to return to the Record Studio screen.

5. Select the component you want to record onto by touching its destination icon.

6. Prepare the recorder for recording (set Dolby Noise Reduction, cue-up the tape, and so on)

7. Once the recorder is set up, put it into the RECORD mode (the procedure for this will depend upon the specific component you have).

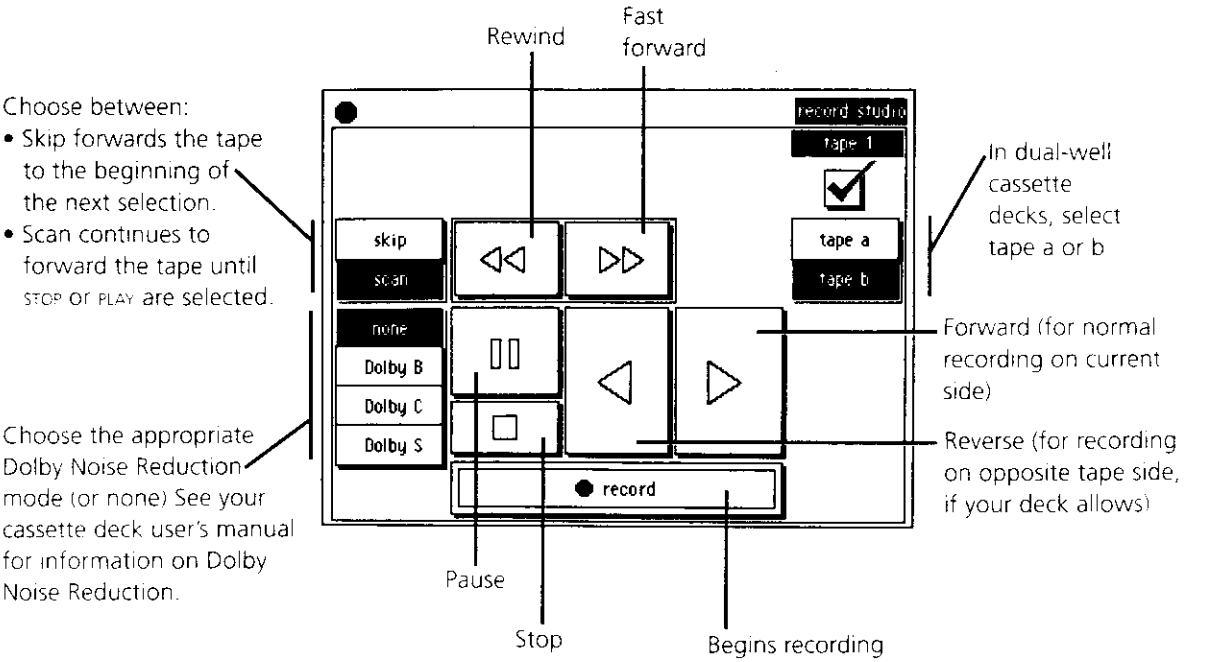
8. Touch the CHECK-MARK key on the component's control screen to return to the Record Studio screen.

9. Touch the SOURCE COMPONENT icon.

10. Put the Source Component into the PLAY mode.

About the cassette deck recording controls

You can only record from a source component that is connected to the Stage 3 Controller's analog inputs. (See 'Selecting the audio input type' on page 45.)


Rewind
Fast forward
Choose between:
• Skip forwards the tape to the beginning of the next selection.
• Scan continues to forward the tape until STOP or PLAY are selected.
skip
scan
none
Dolby B
Dolby C
Dolby S
record studio
tape 1
tape a
tape b
In dual-well cassette decks, select tape a or b
Forward (for normal recording on current side)
Reverse (for recording on opposite tape side, if your deck allows)
Choose the appropriate Dolby Noise Reduction mode (or none) See your cassette deck user's manual for information on Dolby Noise Reduction.
record
Pause
Stop
Begins recording

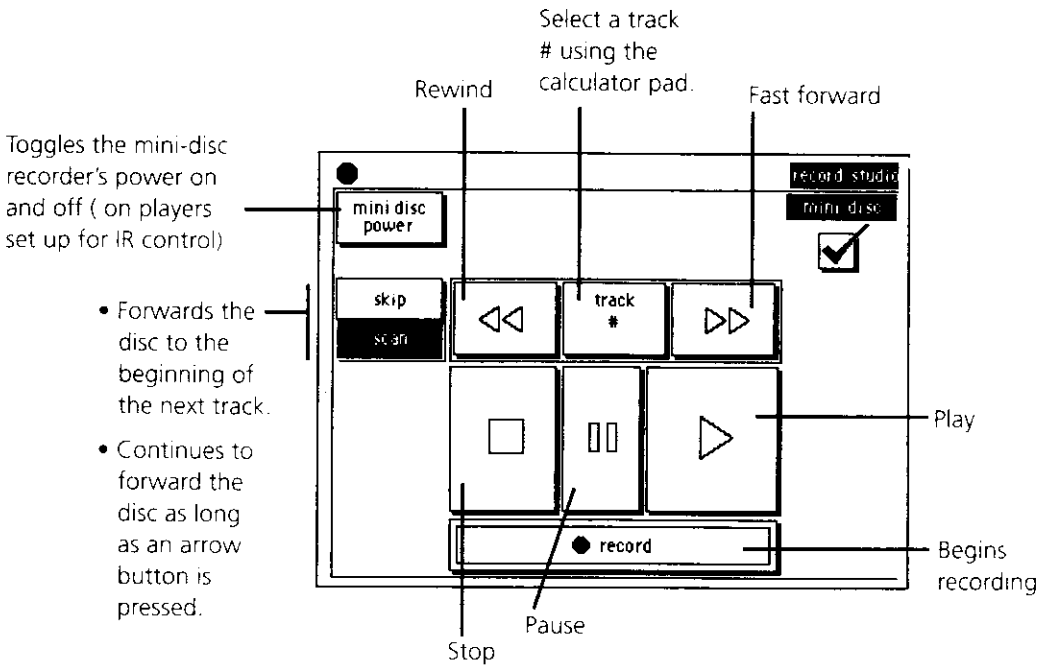
If you have a Kenwood SL16 cassette deck

Kenwood SL16 cassette decks send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these decks:

- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (skip and normal mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

About the Mini-Disc recording controls

If the source is connected to the Stage 3 Controller's digital inputs, you can record using the mini-disc recorder's digital inputs. If the source is connected to the Stage 3 Controller's analog inputs, you can record using the mini-disc recorder's analog inputs.


Select a track # using the calculator pad.
Rewind
Fast forward
Toggles the mini-disc recorder's power on and off (on players set up for IR control)
mini disc power
skip
scan
track #
• Forwards the disc to the beginning of the next track.
• Continues to forward the disc as long as an arrow button is pressed.
Play
record
Begins recording
Pause
Stop

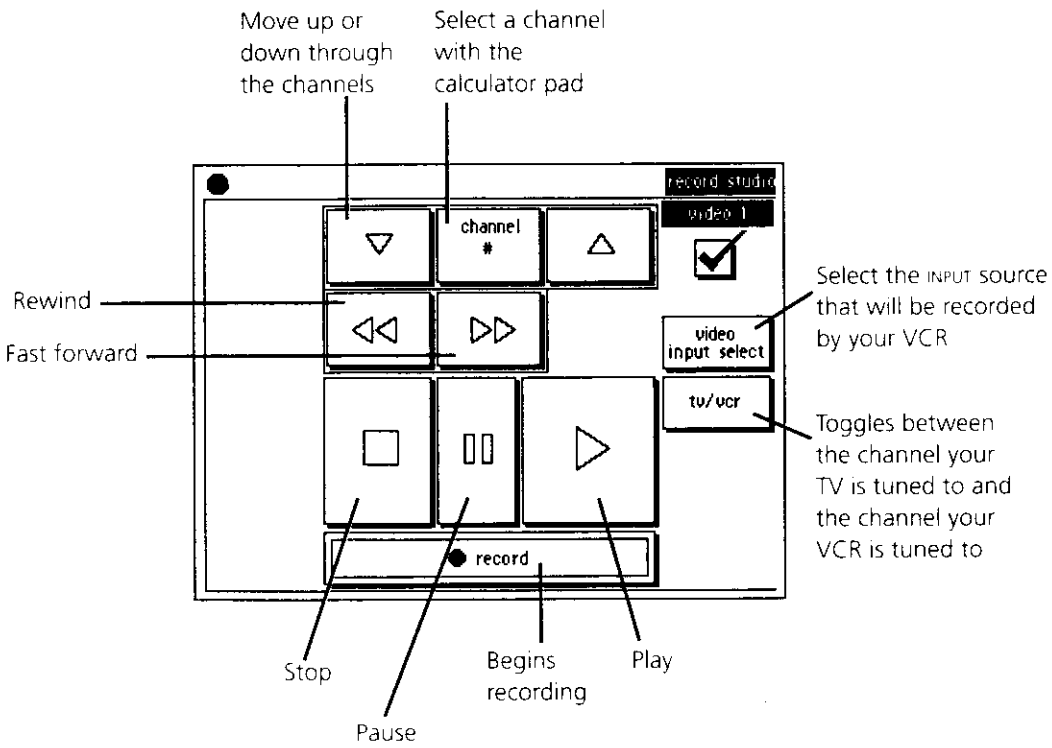
If you have a Kenwood SL16 mini-disc player

Kenwood SL16 mini-disc players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players.

- The TouchPanel's TRACK button will display the currently playing track number.
- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

About the VCR recording controls

You can record from any source connected to the Stage 3 Controller's analog inputs, or from the VCR's built-in tuner, or from any video components connected directly to the VCR itself (not through the Stage 3 Controller). Two video inputs with record capability are available on the Stage 3 Controller. If both are set-up, each would have its own button on the Recording Studio menu. (See 'Selecting the audio input type' on page 45)



System presets are a powerful part of the Stage 3 Controller system. Although a System Preset is similar to a radio preset that recalls a single radio station, a System Preset can recall several settings at once, or can even reconfigure your entire system. For example, family members can adjust the system to their taste, save the settings as a preset, and then later restore the settings by touching one button.

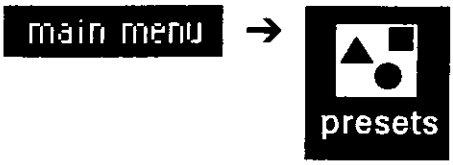
You can create and store up to 6 different System Presets.

You can use a Preset to carry out several commands to prepare for a particular listening or viewing experience. A single System Preset can perform all of the following tasks:

- Turn the Stage 3 Controller's power on
- Change the input type
- Change the volume of each speaker
- Change the delay time of each speaker
- Change all of the DSP Logic settings
- Change the Midnight Mode's dynamic range compression settings
- Activate any of the Surround modes (stereo, Dolby Surround Pro Logic, and so on)
- Activate THX Cinema or DSP Logic processing
- Change the bass and treble settings
- Select the Source Input
- If the source component is a VCR, laserdisc player, CD player, cassette deck or MD recorder, start the Play mode
- If the source is tuner, change the radio station being received.

The Stage 3 Controller stores all of these settings in memory. When you activate that preset, the controller restores all of these settings. You can create another preset with different settings simply by changing the settings and memorizing another preset.

1. To get to the System Presets screen, touch these buttons:



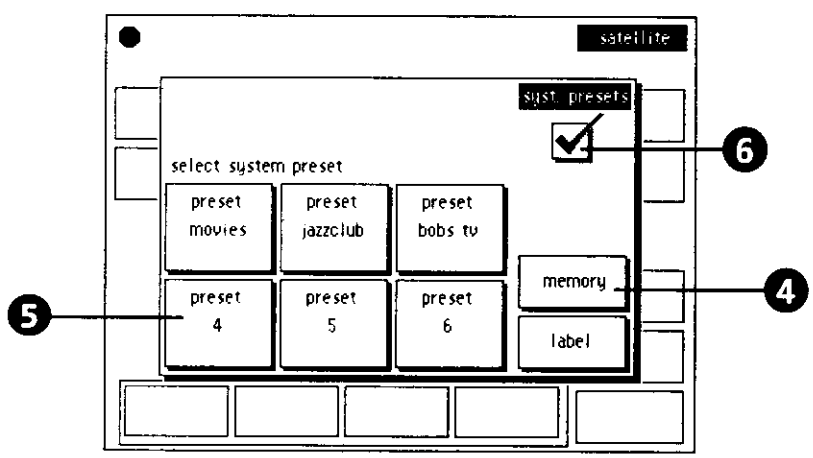
2. Select a source component from the Main Menu. If you select video, laserdisc, CD, tape or MD, it will automatically be put into play when the preset is activated. If you select tuner, the station playing when you memorize the preset will be selected when the preset is activated (even if the station is not a preset).

3. Go to the Sound screen and make any changes you wish to save in the preset (for example, treble and bass adjustments, speaker level adjustments, or selecting a surround sound mode such as Dolby Pro Logic).

4. Touch the MEMORY button, the Stage 3 Controller memorizes the source component and sound settings.

5. Touch a SYSTEM PRESET button to save the preset. If this preset was already programmed, the old preset information will be replaced with your new instructions.

6. Touch the CHECK-MARK to return to the Sound screen.



Playing a system preset

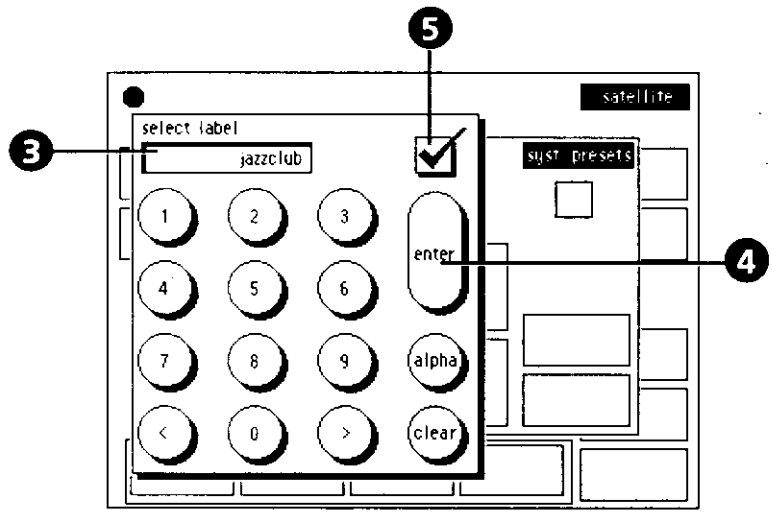
You can play a system preset in two different ways:

- Touch the PRESETS MENU button and then touch a PRESET button from the Preset Screen.
- Play the preset automatically by setting a preset alarm (see the chapter 'Setting the Alarm').

NOTE: If you touch a PRESET button after it has been activated, if the active source component is a VCR, laserdisc, CD, tape or MD, it will be put into the Pause mode.

Labeling a system preset

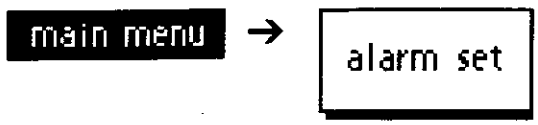
1. On the System Preset screen, touch the LABEL button.
2. Touch the system preset you would like to label. The TouchPanel displays the Calculator Pad.
3. Enter a number or name for your system preset with the Calculator Pad. Any combination of letters and numbers is fine, up to 8 characters
4. Touch the ENTER button to accept your label entry.
5. Touch the CHECK-MARK to apply the label and return to the Preset screen.



Setting a system preset alarm

You can have the TouchPanel automatically activate a system preset at a specific time every day.

1. To get to the the Alarm Set screen, touch these buttons:

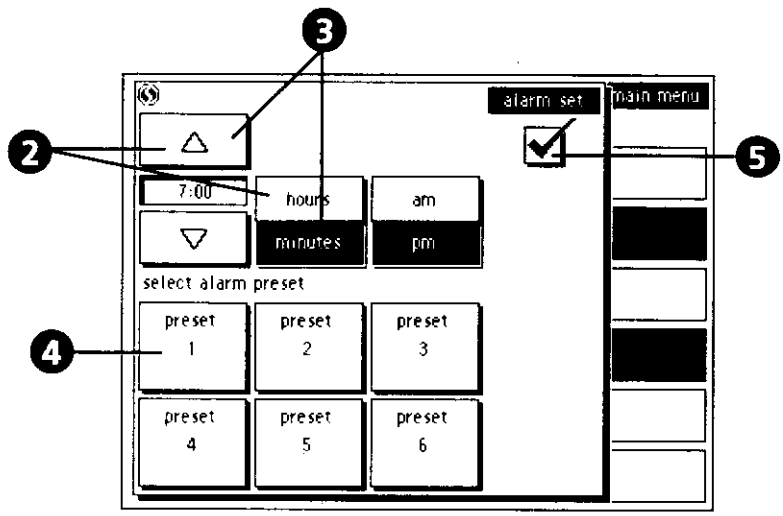


2. To set the hour, touch the HOUR button, then use the ARROW buttons to increase or decrease the time.

3. To set the minutes, touch the MINUTES button, then use the arrow buttons to increase or decrease the time.

4. Select a SYSTEM PRESET button. The System Preset will be activated at the time you set.

5. Touch the CHECK-MARK to exit.



Controlling accessories

The Stage 3 Controller can activate up to 6 non-audio accessories that can be set us using custom installation equipment capable of learning IR codes. The learned IR codes allow the accessory to be activated using the TouchPanel.

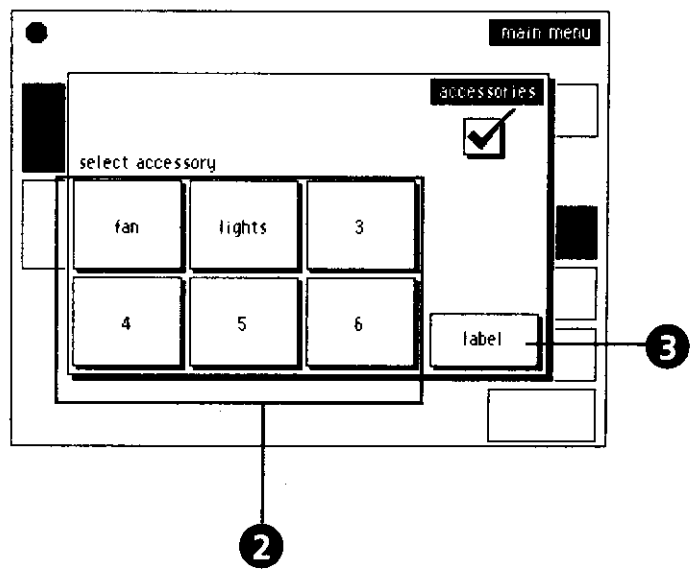
To program the TouchPanel's accessory IR code into the learning accessory device, use the Stage 3 Controller's IR repeater and follow the instructions for the accessory device. (Touching the ACCESSORIES button sends its code out through the IR repeater.)

❶ To get to the Accessories screen, touch these buttons:

main menu → accessories

❷ Touch one of the ACCESSORY buttons to activate an accessory.

❸ Touch the LABEL button to label an accessory using the Calculator Pad.



Setting the analog input level

Setting the proper input level eliminates distortion that occurs if an audio component's output level is too high. When this happens, the Input Overload Indicator on the Controller will flash red continually or remain red for 1 second or longer, letting you know you should decrease the input level for this component. (Occasional brief flashing red of the input overload indicator is OK).

If you're listening to a component and see that the Input Overload Indicator is flashing red too much or remaining lit, takes these steps:

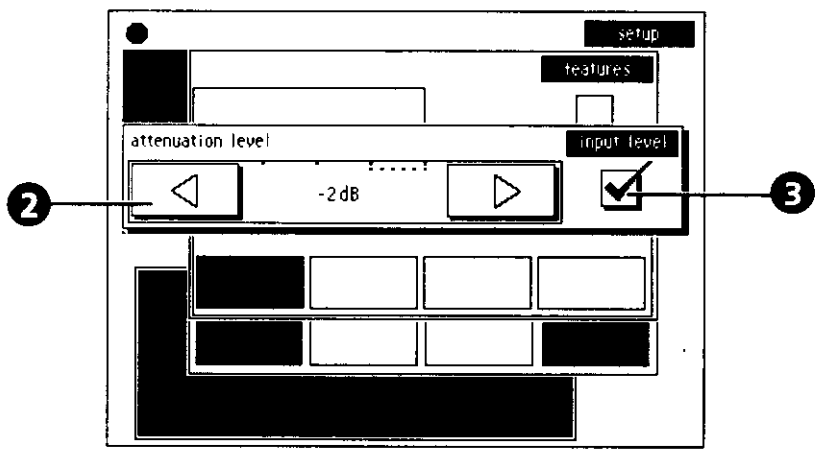
1. To get to the Input Level screen, touch these buttons:

main menu → setup → component → component icon

2. Touch the INCREASE ARROW button. Each touch changes the audio level by 2 dB. Adjust the input to the highest level you can without causing the Input Overload Indicator to flash red frequently or remain red for 1 second or longer.

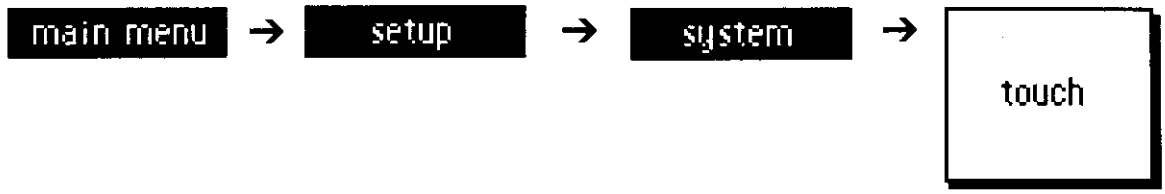
3. Touch the CHECK-MARK to return to the Features screen.

4. Repeat this process for any component with an audio output that is too high.



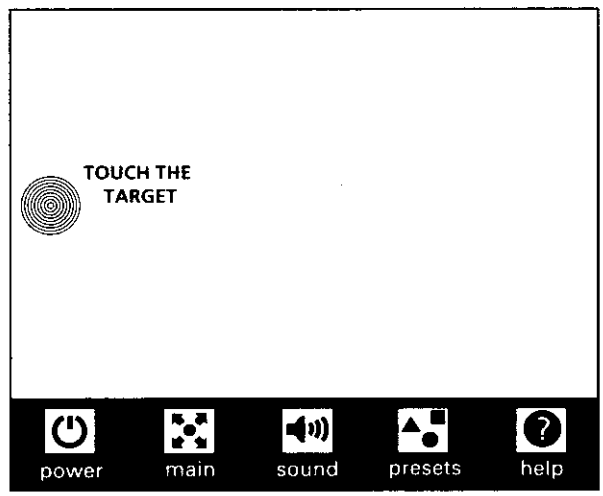
Re-calibrating the TouchPanel

1. If you you need to re-calibrate the TouchPanel screen, touch the following buttons:



2. Touch YES on the Confirm screen. The TouchPanel begins the calibration process.

3. Touch the center of each target as it moves around the screen. You will touch the target 4 times. If you're not satisfied with the result, or you missed one of the targets, you can always start over from the touch screen button.



TouchPanel display fades-out, or doesn't light-up

- Recharge the TouchPanel battery or replace it with a fully charged one.
- Check the TouchPanel *contrast* setting.

TouchPanel doesn't respond to touch commands, response is erratic, or display is erroneous

- Check that the TouchPanel is close enough to the Controller (maximum range is approximately 100 feet).
- Recalibrate the TouchPanel screen (see *Setting up your Stage 3 Controller*).
- Recharge the TouchPanel battery or replace it with a fully charged one.
- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding down the MUTE button.

Controller or other components don't respond to TouchPanel commands, or response is erratic

- Check that the TouchPanel is close enough to the Controller (maximum range is approximately 100 feet).
- Check that the setup codes for Kenwood IR-controlled and non-Kenwood components are correct (see *Setting up your Stage 3 Controller*).
- Check that the System Control cables are properly connected to Kenwood SL16-controllable components.
- Check that the IR repeater is properly connected, and is placed in a location that covers all the components in the system.
- Change the RF communications channel (see *Setting up your Stage 3 Controller*).
- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding-down the MUTE button.
- Reset the Controller's microprocessor by unplugging the power cord from the AC outlet and plugging it back in with the main power switch depressed and while holding-down the REMOTE POWER button. (**NOTE:** Resetting the Controller's

microprocessor clears all of the stored defaults and setup data, returning the Controller and TouchPanel to their factory-shipped condition. You will again have to perform all of the system, component, speaker and DSP Logic setup procedures as explained in *Setting up your Stage 3 Controller*).

- Because there are so many different manufacturers and IR-controlled products on the market, the TouchPanel's control buttons may not exactly match or be able to control the functions of all components.

Kenwood 100 disc CD changer won't respond to TouchPanel commands

- Check that the CD changer's power cord is plugged onto one of the controller's switched accessory outlets. Then turn the controller OFF and ON again.

A broken line shows through the RF Communications Icon

- Check that the Controller's MAIN POWER switch is turned ON.
- Check that the TouchPanel is close enough to the Controller (maximum range is approximately 100 feet).
- Change the RF communications channel (see *Setting up your Stage 3 Controller*).

A component's icon doesn't appear on the Main Menu, even though you've connected it to your system

- Set up the component in the Setup (Component) Menu (see *Setting up your Stage 3 Controller*).

The controls for a component do not appear on the TouchPanel when you select that component's icon

- Set up the component in the Setup (Component) menu, making sure to select the proper system control mode for that component (see *Setting up your Stage 3 Controller*).

No sound

- Check that the volume is set at a proper level.
- Check that the mute is OFF.
- Check that the proper input has been selected.
- Check that the input cable(s) from the source component is connected properly.
- Check that the proper Input Type has been selected in the Sound Menu.
- Check that all of the speakers in the system have been activated in the Setup (Sound) Menu. (The Setup Sound screen will show a darkened icon for each speaker that has been properly set up.)

- Check that the individual speaker levels are set properly in the Sound Menu.
- Check that the Tape 2 Monitor has not been activated. (The Tape 2 Monitor icon on the Main Menu will be darkened if the circuit has been activated.)

No sound from one or more of the speakers, or the sound is abnormally low

- Check that all cables are connected properly.
- Check that all of the speakers in the system have been set up properly in the Setup (Sound) Menu (the Setup Sound screen will show a darkened icon for each speaker that has been activated).
- Check that the individual speaker levels are set properly in the Sound Menu.

No sound from the surround speakers and/or center speaker

- Check that either Dolby 3 Stereo, Dolby Pro Logic or Dolby Digital (AC-3) has been selected in the Sound Menu.

Sound only from center speaker when Dolby Pro Logic is selected

- Check that the program is in stereo (mono programs will play only through the center speaker in the Dolby Pro Logic mode).

No sound from the secondary speakers

- Check that the Remote Speaker Volume is properly set.
- Check that the source is connected via the analog inputs.
- Check that the analog input is selected on the Input Type selector.

No sound from certain laserdiscs

- Check that the disc contains a digital soundtrack (the disc's cover will bear a 'digital sound' logo). Some older laserdiscs contain only analog soundtracks. If the disc does not have a digital soundtrack, use the Input Type selector to change the input type to Analog.

No sound output to a video or audio tape deck during recording

- Check that the audio cables have been properly connected.
- Check that the source's Analog Input has been selected in the Sound Menu (digital inputs cannot be recorded from).

No video signal from the source component to the TV or recording VCR

- Check that the video source and TV are connected via the same type of connectors. (S-Video input signals are not sent out via the composite video output connections, and composite video input signals are not sent out via the S-Video output connections).

A hum when you select the PHONO input

- Check that the audio cables are plugged securely into the Phono jacks.
- Check that the turntable is grounded on the rear panel. The ground wire should be connected to the screw labeled 'Signal Gnd'.

With a Dolby Digital (AC-3) program, the loud sounds aren't very loud, and the quiet sounds aren't very quiet

- Check that the Midnight Dynamic Range Compression mode hasn't been activated.

Distortion in subwoofer

- Set Subwoofer Bass Limiter (see *Setting up your KC-Z1 Controller*).

The Bass Limiter is set at -24 and there is still audible distress from the subwoofer when listening at your usual volume levels

- If you're using a powered subwoofer, lower the volume on the subwoofer (or on the subwoofer power amplifier) until the distress disappears.
- Use the TouchPanel's Setup Sound menu and reduce the subwoofer's default channel level until the distress disappears.
- Reduce the TouchPanel Volume Control setting until the distress disappears (this will limit how loud you can listen to your system).
- Purchase a higher-quality subwoofer.

The ON/STANDBY indicator flashes red

- Turn the MAIN POWER switch OFF and ON again.
- Reset the Controller's microprocessor by unplugging the power cord from the AC outlet and plugging it back in with the MAIN POWER switch depressed and while holding-down the REMOTE POWER button. (NOTE: Resetting the Controller's microprocessor clears all of the stored defaults and setup data, returning the Controller and TouchPanel to their factory-shipped condition. You will have to reset the system, component, speaker and DSP Logic settings. See *Setting up your KC-Z1 Controller.*

The Ref/Peak Level indicator flashes red continually, or stays red for more than 1 second

- Lower the analog input level for the source component you're listening to. (see 'Setting the analog input level' on page 54)

The Ref/Peak Level indicator flashes green continually, or stays green for more than 1 second

- Do nothing. If the Ref/Peak Level flashes green, the source component output levels are normal, and there is no problem.

You can't receive radio stations

- Check that the station is tuned in properly.
- Check that the antenna is connected properly.

You can't receive a preset station by pressing the corresponding preset button

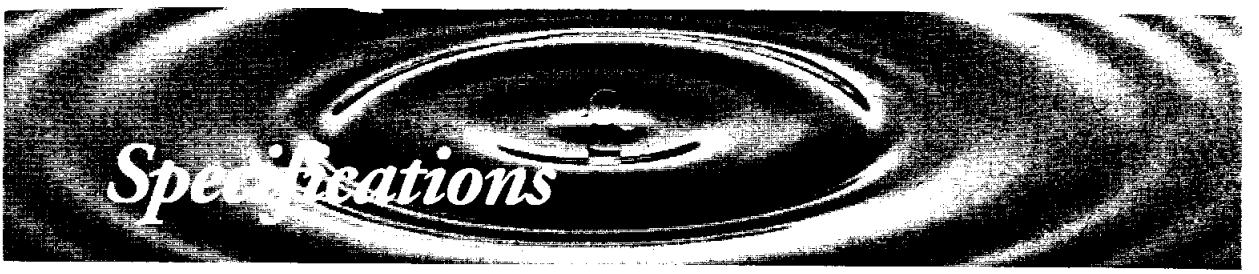
- Check that the preset station is a receivable frequency.
- Check that the preset memory hasn't been cleared because the power cord was unplugged a long time. If so, preset the station again.

Interference with reception

- Check for interference from electrical appliances by turning them OFF. If the interference goes away, leave the appliances OFF.
- Check for interference from the TV set by turning it OFF. If the interference goes away, leave the TV OFF, or move the antenna away from the TV.
- Check for interference from automobiles by moving the antenna as far away from roads as possible. If the interference goes away, permanently install the antenna away from roads.
- Check if the TouchPanel is set on top of the Controller or close to the antennas, and move it away (the fluorescent screen in the TouchPanel can interfere with AM reception).

You've forgotten your 4-digit security code

- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding-down the MUTE button.



Preamp section

Total harmonic distortion:

All channels except for Subwoofer channel

	0.003%	(1 kHz, 1.0 volt)
	0.003%	(20 Hz to 20 kHz, 1.0 volt)
Subwoofer Channel	0.05%	(31.5 Hz, 1.0 volt)

Frequency response	
All inputs except for phono input	6 Hz to 100 kHz, +0 dB, -3 dB
Phono RIAA response	20 Hz to 20 kHz, ±0.5 dB
Signal-to-noise ratio (IHF 1978):	
All inputs except for phono input	101 dB
Phono input (MM)	87 dB
Input Sensitivity/impedance	
All inputs except for phono input	200 mV/47 k-ohms
Phono input (MM)	2.5 mV/47 k-ohms
Tone Control	
Bass	±10 dB (100 Hz)
Treble	±10 dB (10 kHz)

Output level/impedance

Surround: All channels except for Subwoofer channel

1.0 volt / 180 ohms (1 kHz, 0.003% THD)

Surround: Subwoofer channel — 1.0 volt / 180 ohms (31.5 Hz, 0.003% THD)

Video section

Input level/impedance	
Composite Signal:	1.0 volt peak-to-peak / 75 Ω
S-video: Luminance signal	1.0 volt peak-to-peak / 75 Ω
S-video: Chrominance signal	0.286 volt peak-to-peak /75 Ω
Output level/impedance	
Composite Signal:	1.0 volt peak-to-peak / 75 Ω
S-video: Luminance signal	1.0 volt peak-to-peak / 75 Ω
S-video: Chrominance signal	0.286 volt peak-to-peak /75 Ω

Digital section

Sampling frequency	
32 kHz, 44.1 kHz, 48 kHz	
Input level/impedance	
All inputs: Optical	-15 dBm to -21 dBm, 660 nm ± 30 nm
All inputs: Coaxial	0.5 volt peak-to-peak / 75 Ω
Output level/impedance	
All inputs: Optical	-15 dBm to -21 dBm, 660 nm ± 30 nm
All inputs: Coaxial	0.5 volt peak-to-peak / 75 Ω

FM tuner section

Tuning frequency range	87.5 to 108 MHz
Useable sensitivity (Mono)	1.2 µV (75 Ω) / 13.2 dBf (75 kHz deviation, s/n 30 dB)
50 dB quieting sensitivity (Stereo)	32 µV (75 Ω) / 41.2 dBf (75 kHz deviation)
Total harmonic distortion (1 kHz)	
Mono	0.6% (65.2 dBf input)
Stereo	0.7% (65.2 dBf input)
Signal-to-noise ratio (1 kHz, 75 kHz DEV.)	
Mono	75 dB (65.2 dBf input)
Stereo	68 dB (65.2 dBf input)
Selectivity (± 400 kHz)	50 dB
Stereo Separation (1 kHz)	40 dB
Frequency response	30 Hz to 15 kHz, +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range	530 Hz to 1700 kHz
Useable sensitivity (30% modulation, s/n 20 dB)	16 µV / (500 µV/m)
Total harmonic distortion	0.7%
Signal-to-noise ratio (30% modulation, 1 mV input)	45 dB
Selectivity	30 dB

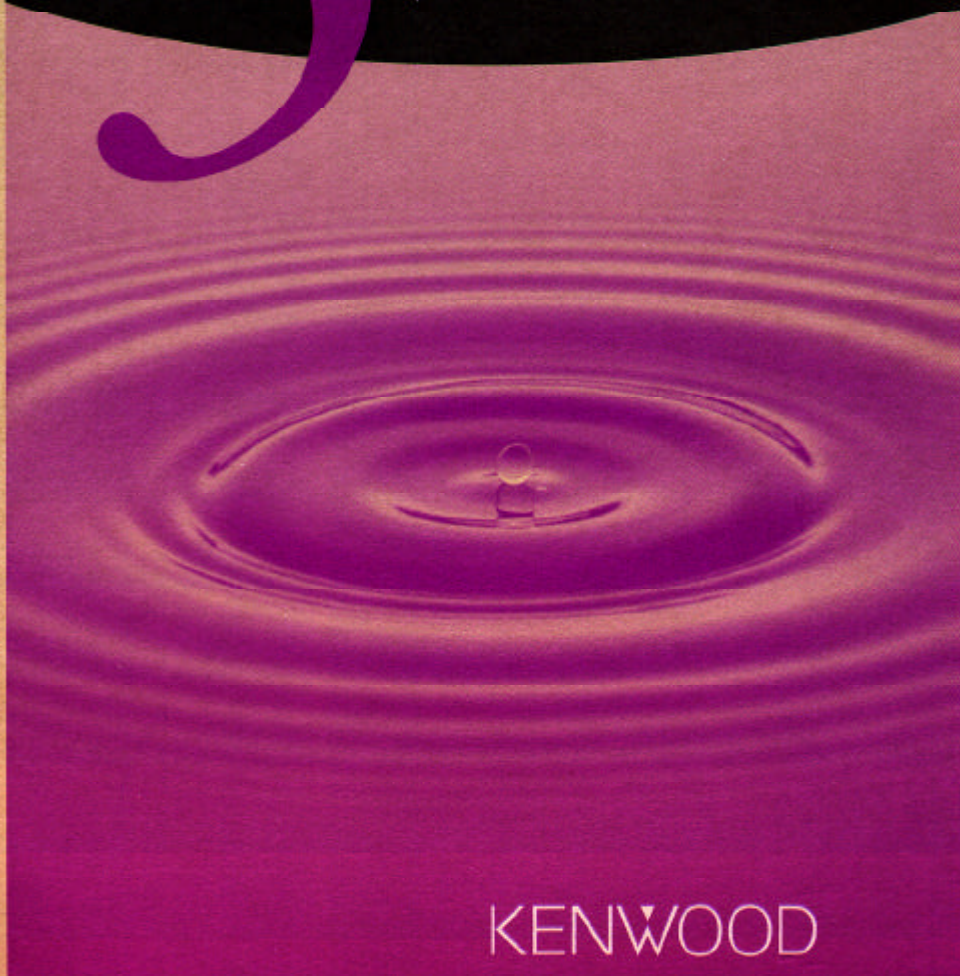
General

Power consumption	90 W
AC outlet (switched)	3 (total 200 W max.)
Dimensions:	
Width	17-5/16" (440 mm)
Height	6-1/4" (159 mm)
Depth	17-5/16" (440 mm) without TouchPanel
Weight (net)	26.9 lb (12.2 kg)

Kenwood continually tries to improve its products, so specifications may change without notice.

3 stage

Setting up your KC-Z1 Controller



KENWOOD

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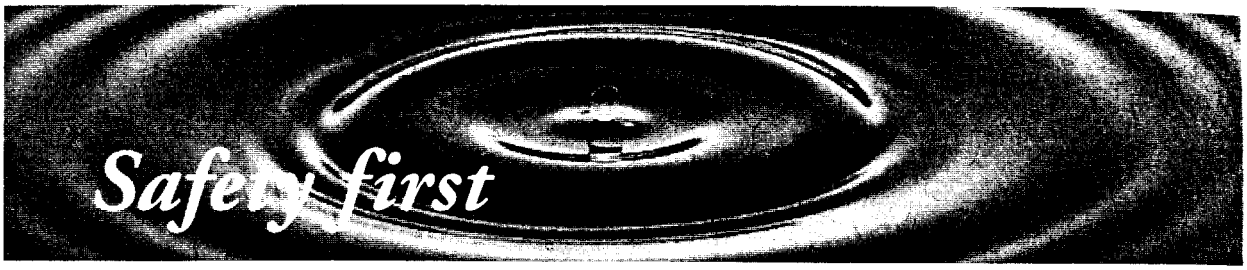


WARNING

To prevent fire or electric shock, do not expose this unit to rain or moisture.

CAUTION

To prevent electric shock, match the wide blade of the plug to the wide slot in a wall socket, and insert fully.

CAUTION

To reduce the risk of electric shock, do not remove the unit's cover. There are no user-servicable parts inside. Have the unit serviced by qualified service personnel.

Safety Symbols

We've placed these safety symbols on the back of the unit.

The lightning bolt symbol is to alert you to the danger of electric shock from the operating electric parts inside the unit.

The exclamation point symbol is to let you know that there are important operating and servicing instructions in this manual that you should read before you operate this unit.

About the power supply

This unit is designed for operation in the USA and Canada using a power supply of AC 120 volts only.

Safety Precautions

Read this page carefully to ensure safe operation. Please read all of the safety and operating instructions before operating this unit. Adhere to all warnings on the unit and in this manual. Follow all the safety and operating instructions. These safety and operating instructions should be retained for future reference.

1 **Power sources.** The unit should be connected to a power supply only of the type described in this manual or as marked on the unit. If you are not sure of the type of power supply to your home, consult your unit dealer or local power company. For units intended to operate from battery power, or other sources, refer to the instruction manual.

2 **Power-cord protection.** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

3 **CAUTION—Polarization.** This unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider that the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your outlet. Do not defeat the safety purpose of the polarized plug.

4 **Ventilation.** Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the unit and to protect it from overheating, and these openings must not be blocked or covered. The unit should be situated so that its location or position does not interfere with its proper ventilation.

- To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 4 inches away from the walls.
- Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

5 **Water and moisture.** The unit should not be used near water; for example, near bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6 **Temperature.** The unit may not function properly if used at extremely low or freezing temperatures. The ideal ambient temperature is above +41°F.

7 **Heat.** The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.

8 **Electric Shock.** Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes

into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.

9 **Enclosure removal.** Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.

10 **Cleaning.** Unplug this unit from the wall outlet before cleaning. Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.

11 **Lightning.** For added protection for this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system, This will prevent damage to the unit due to lightning and power-line surges.

12 **Abnormal smell.** If an abnormal smell or smoke is detected, immediately turn the power OFF and unplug the unit from the wall outlet. Contact your dealer or nearest service center.

13 **Damage requiring service.**

The unit should be serviced by qualified service personnel when:

- The power-supply cord or the plug has been damaged.
- Objects have fallen, or liquid has been spilled into the unit.
- The unit has been exposed to rain or water.
- The unit has been dropped, or the enclosure damaged.
- The unit exhibits a marked change in performance.
- The unit does not appear to operate normally by following the instruction manual.
- Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.

14 **Servicing.** The user should not attempt to service the unit beyond that described in the instruction manual. All other servicing should be referred to qualified service personnel.

15 **Power lines.** An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

16 **AC outlets.** Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.

17 **Overloading.** Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

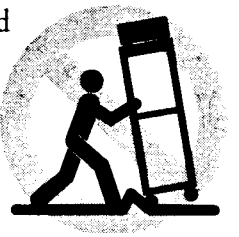
18 **Attachment.** Do not use attachments not recommended by the unit manufacturer as they may cause hazards.

19 **Replacement parts.** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

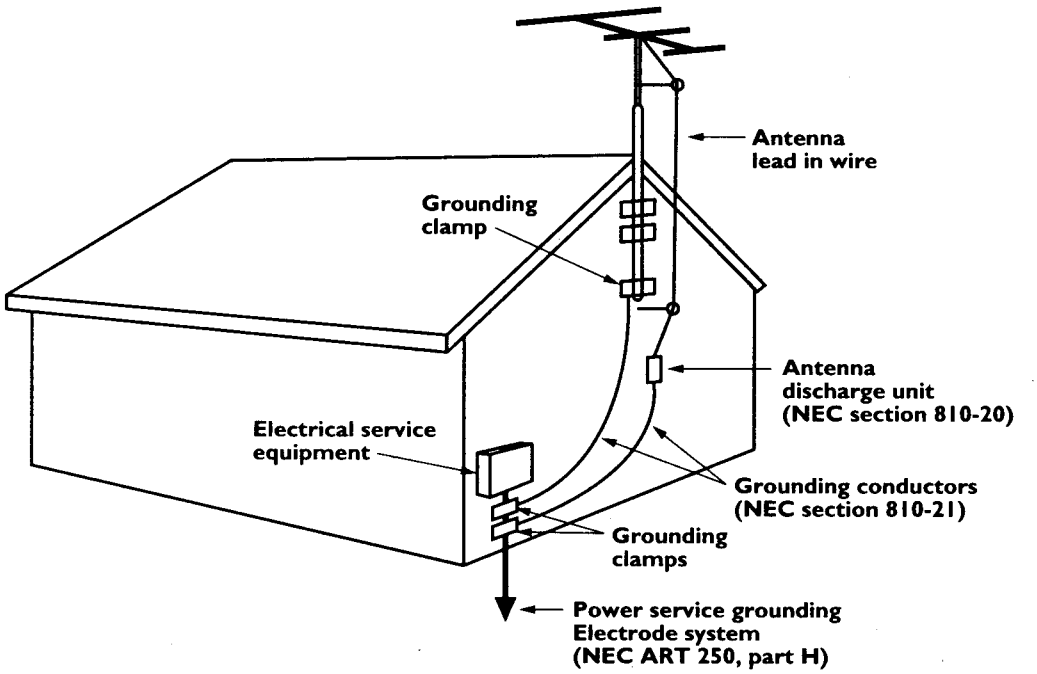
20 **Safety check.** Upon completion of any service or repairs to this unit, ask the service tech-

nician to perform safety checks to determine that the unit is in proper operating condition.

21 **Carts and stands.** Don't put this unit on a cart or stand that is unsteady or that can not support the unit's weight. If you move this unit on a cart or stand, be careful—quick stops, excessive force and pushing over or uneven surfaces, may cause the cart to overturn and damage your equipment.



22 **Outdoor Antenna Grounding.** If an outside antenna is connected to the receiver, be sure the antenna system is grounded to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information on the proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. NOTE: Complies with UL in the U.S.A.



23 **TouchPanel.** Handle the TouchPanel carefully. Do not drop the TouchPanel or its rechargeable batteries onto a hard surface. If the TouchPanel's LCD screen is damaged or fractured, do not put any of the liquid substance into your mouth. If any of the liquid substance comes into contact with skin or clothing, immediately wash it off with soap and water.

FCC W ar ning

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

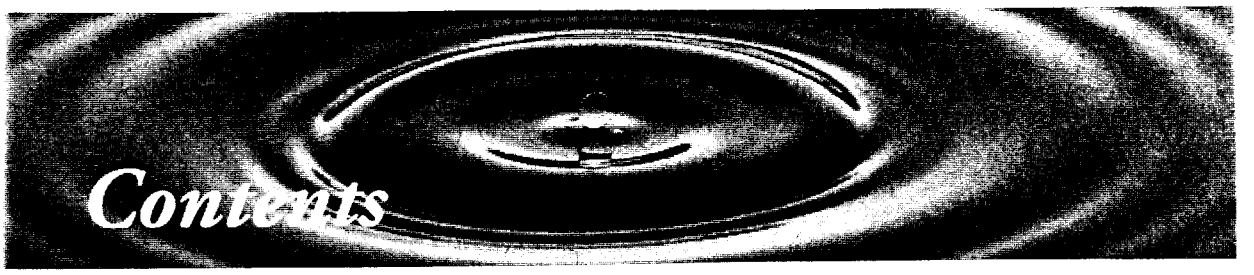
Important

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Canadian IC Compliance Notice

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.



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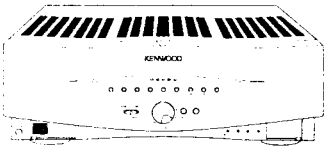
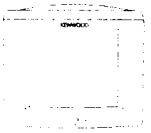
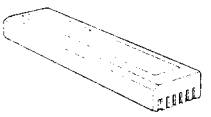
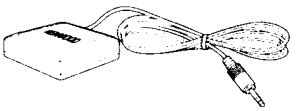
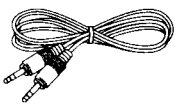
Unpacking your Stage 3 Controller

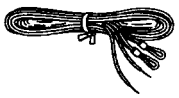
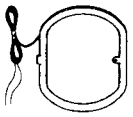
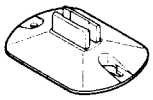
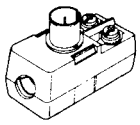
Unpack your Stage 3 Controller carefully and examine it for shipping damage. If it is damaged or fails to operate, notify your dealer immediately. If this product was shipped to you directly, notify the shipping company without delay. Only the person or company who originally received the product can file a claim against the carrier for shipping damage. Keep the original carton and packing materials in case you need to transport or ship your Stage 3 Controller.

Did you get everything?

Check the list below to make sure you have everything. And before you start setting up the system, look at the list of tools and other items you'll need.

In this box you should have

- Stage 3 Controller unit 
- TouchPanel 
- Batteries for TouchPanel (2) 
- Infra-Red (IR) Repeater 
- Audio cables (3)
- System Control cable 

- FM indoor antenna 
- AM loop antenna 
- AM loop antenna stand 
- Antenna adaptor 

You may need to purchase:

Audio cables
Video cables
S-Video cables (for TVs with S-Video capability only)
RF modulator (for TVs without video inputs)
Speaker wire (as needed)

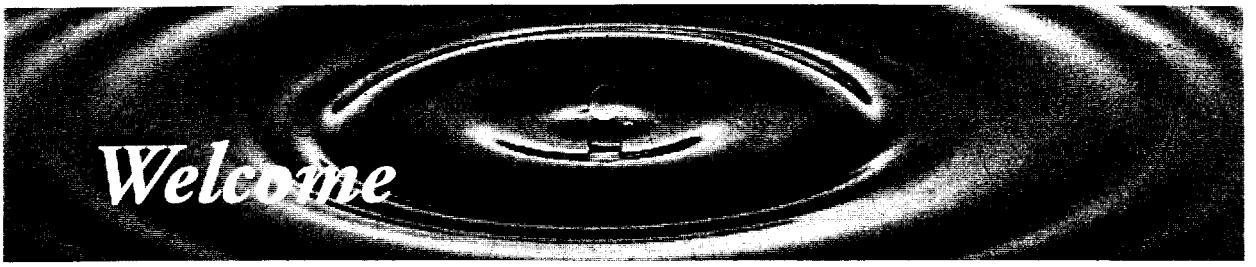
You may also need these tools:

Screwdriver (slot and/or Phillips)
Pliers
Wire cutters
Wire strippers
Sound level meter (Radio Shack part #33-2050)

For your records

Record the serial number (found on the back of the unit) on the warranty card, and in the space below. If you need to call your dealer for information or service, you'll need the model and serial number. And be sure to save your original purchase receipt.

Model Number: KC-Z1	Serial Number:



We designed the Stage 3 Controller to totally change the way you operate your audio/video system. And we're sure that Stage 3 will simplify your home entertainment experience.

We've tried to make setting up your system as easy as possible, too. However, since the Stage 3 Controller works with all of your audio and video components, connecting the system can be fairly complex.

This guide is divided into easy-to-follow steps. Some steps are optional, and if they don't apply, just skip ahead to the next step.

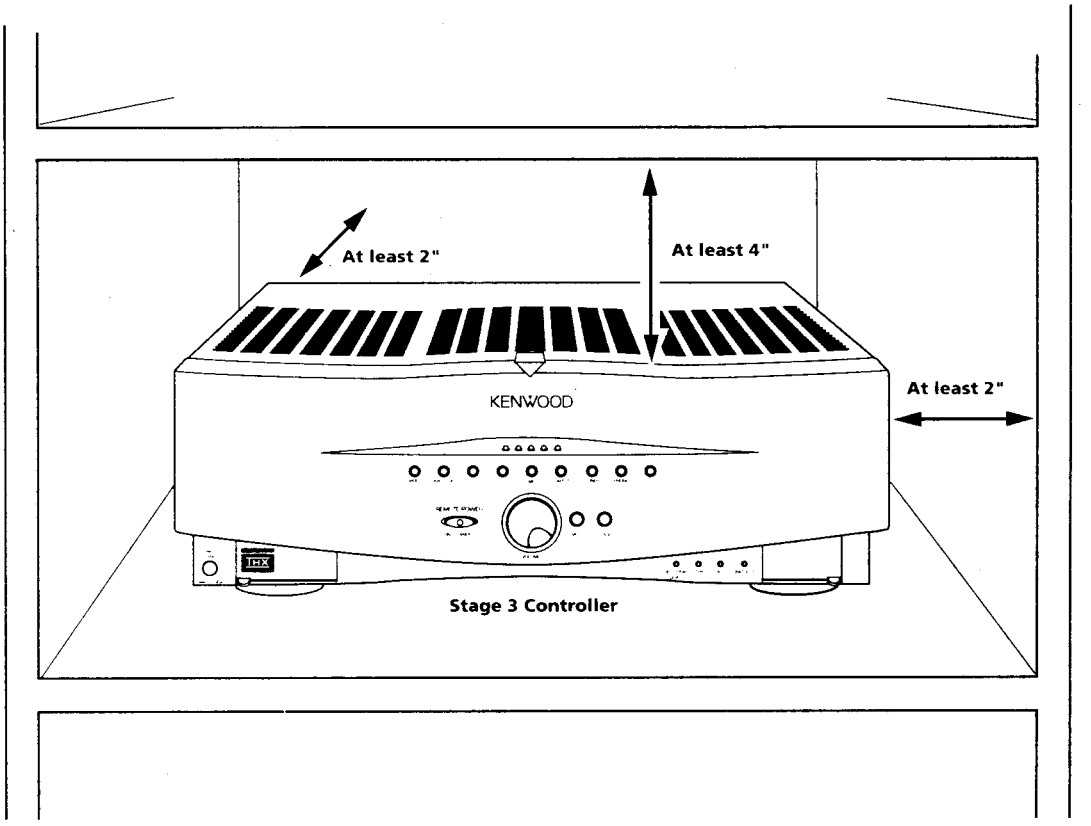
Be sure to use these instructions along with those in the manuals for any equipment you're connecting (like CD players, cassette decks, laser disc players, satellite or cable tuners, televisions, amplifiers, equalizers, VCRs or speakers).

Finally, thanks for purchasing this Stage 3 Controller. We hope it brings you years of music and home theater enjoyment.

Placing the Stage 3 Controller step 1

The Stage 3 Controller can produce a lot of heat, so it's important to allow plenty of ventilation.

- Do not place the Stage 3 Controller directly on top of a heater or a heat-generating component (such as a power amplifier). The heat may prevent the recharging of the TouchPanel batteries.
- Leave at least 4 inches of space above the controller.
- Leave at least 2 inches of space behind, and on each side of the controller.
- If you place the controller inside a stereo rack or cabinet, make sure that you leave the door open slightly while the controller is on.



Stage 3 Controller

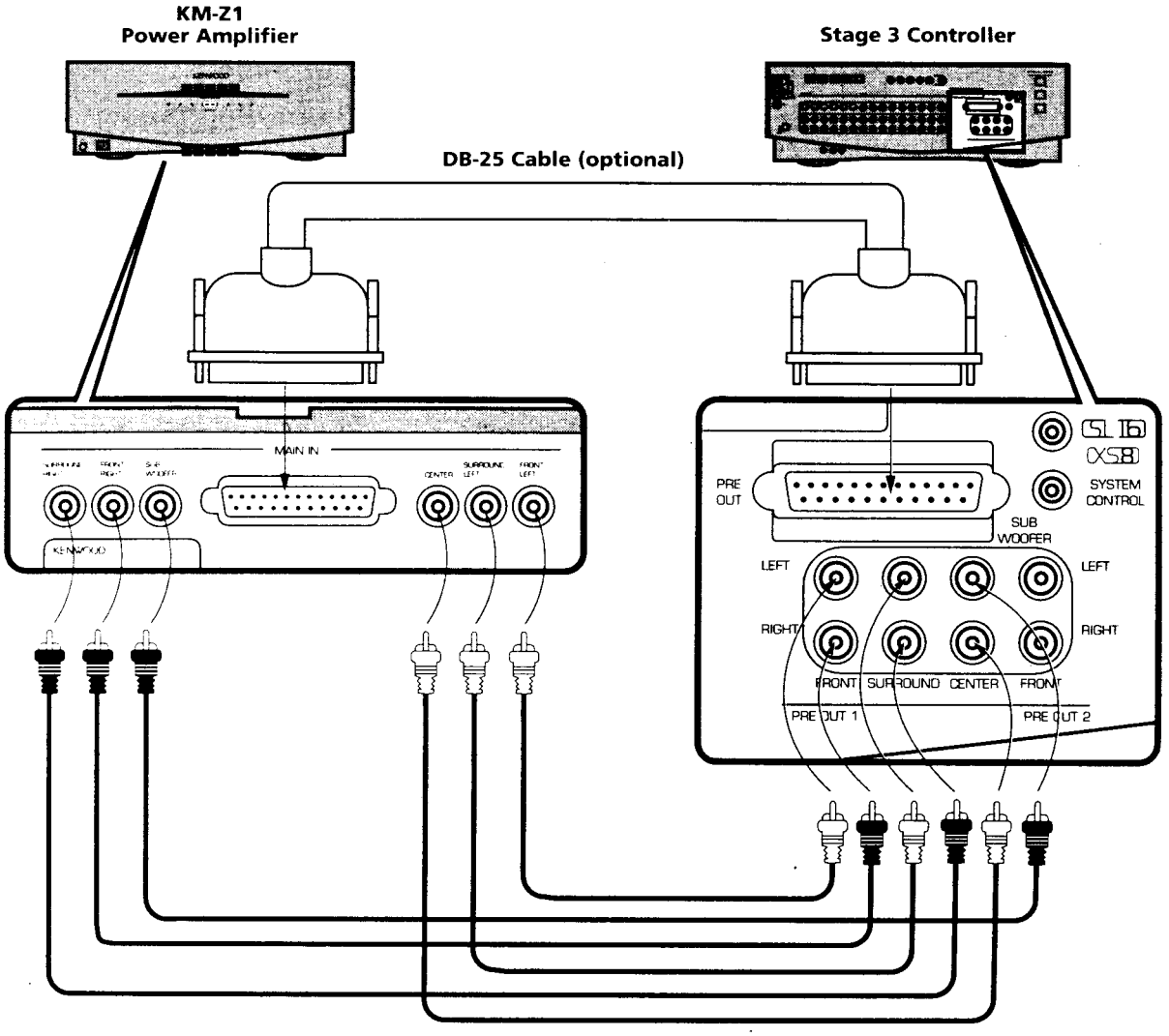
Connecting a power amplifier

step 2

Please wait until you've connected all of the cables before plugging the controller into the AC wall outlet and turning it on.

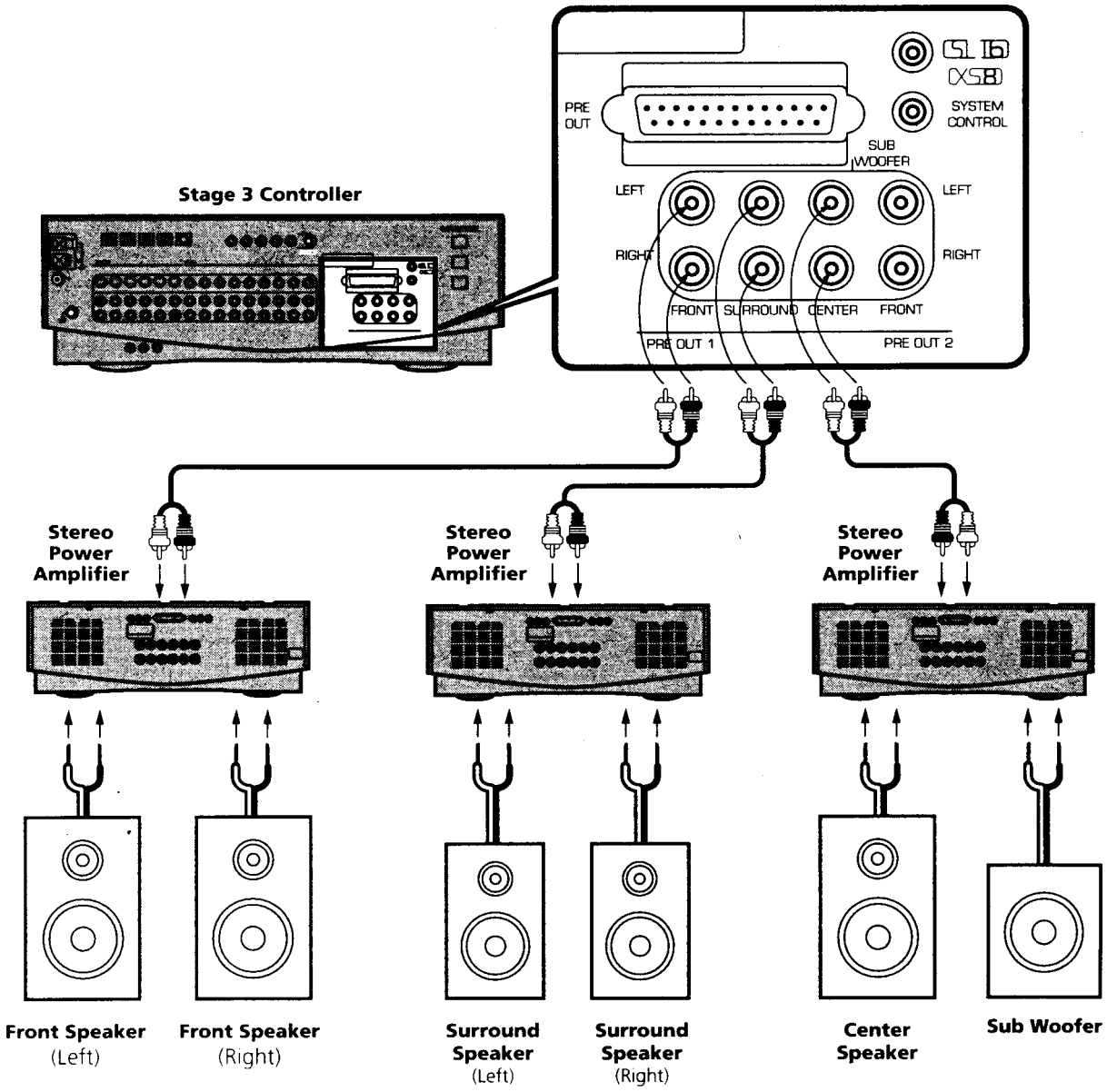
Connecting a Stage 3 Power Amplifier

To connect the Stage 3 Controller to the Stage 3 Amplifier, you can use the 6 cables that come with the amplifier, or use a DB-25 cable you buy yourself. If you decide to use a DB-25 cable, we recommend that you use a shielded DB-25 cable (such as the Monster Cable I-206 HTDB). For more information, contact the dealer where you purchased your Stage 3 Controller. Do not use the DB-25 cable and the individual preout cables at the same time.



Connecting any other power amplifier(s)

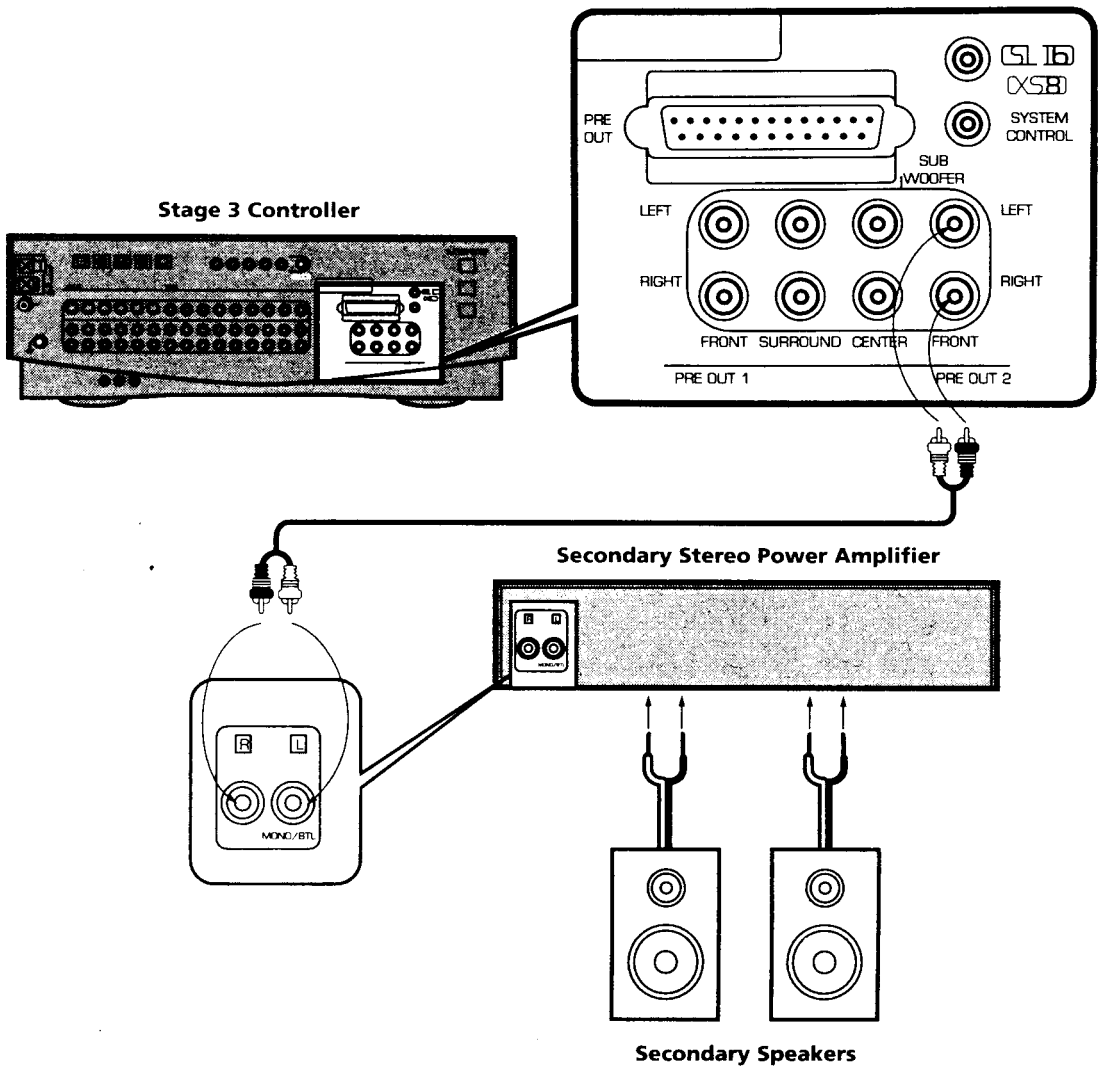
You can use the Stage 3 Controller preout jacks to connect up to 3 amplifiers to drive front, surround, and subwoofer speakers. Using the supplied audio cables, connect the 6 Preout-1 jacks on the Stage 3 Controller to the input jacks on the power amplifier(s). To connect your speakers, refer to the manuals for the power amplifiers and the individual speakers.



Connecting a secondary power amplifier

You can use the Stage 3 Controller's Preout-2 jacks to connect a secondary power amplifier to drive speakers elsewhere in the home. You can adjust the volume of the secondary amplifier and speakers separately from the volume of the main amplifier and speakers. (Refer to *Using your Stage 3 Controller* for instructions on how to adjust the volume level.) Sound will play through the secondary speakers as well as the main speakers. Using a pair of audio cables (not supplied), connect the secondary amplifier to the Stage 3 Controller.

Note: Only sources connected using analog inputs will play through the Preout-2 outputs. Refer to *Using your Stage 3 Controller* for instructions on selecting a source's analog inputs.



You can connect your television, laser disc player, cable or satellite TV tuner, and up to 3 VCRs to the Stage 3 Controller. Be sure to read the manuals that come with your video components for more instructions.

- Make sure that you connect the plugs firmly, so there's no sound loss or unwanted noise later.
- Whenever you connect or disconnect cables, turn off the power and unplug the power cord from the AC wall outlet to avoid damaging your unit.
- The cables are not included with the Stage 3 Controller.

About S-video

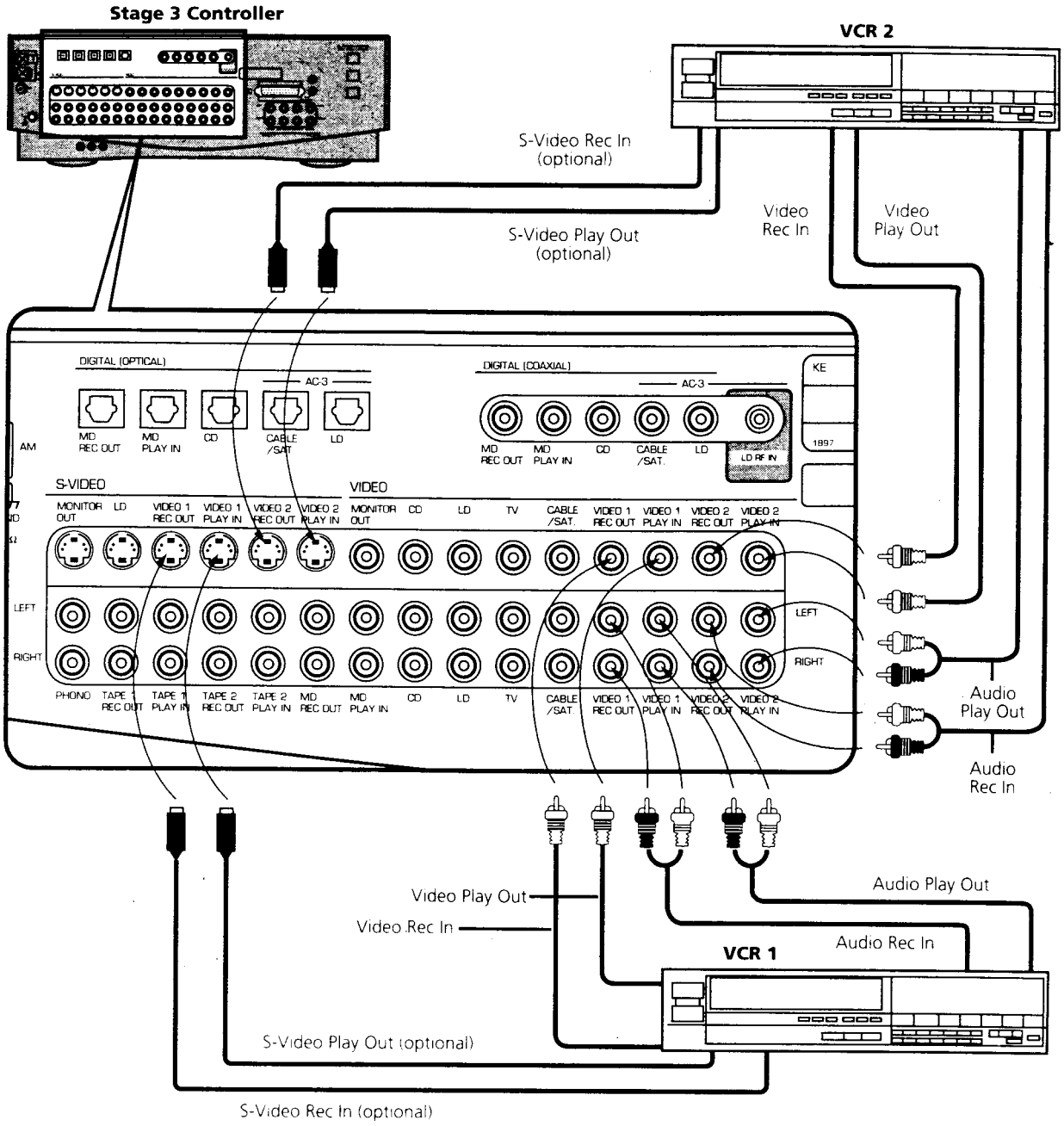
If your video components have S-video capability, using the S-video jacks will provide superior video performance.

- If you use the S-video jacks, you must use them for both the video source and TV connections. Composite video sources are not output through the Stage 3 Controller's S-video outputs (and vice versa).

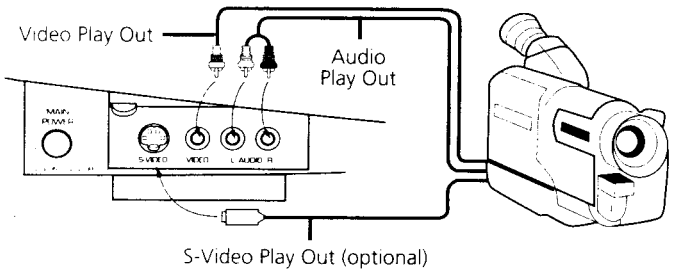
Connecting your VCRs

You can connect up to two VCRs to the Stage 3 Controller.

- If you use the S-video jack, do not connect the Video Play Out or Video Record In cables.



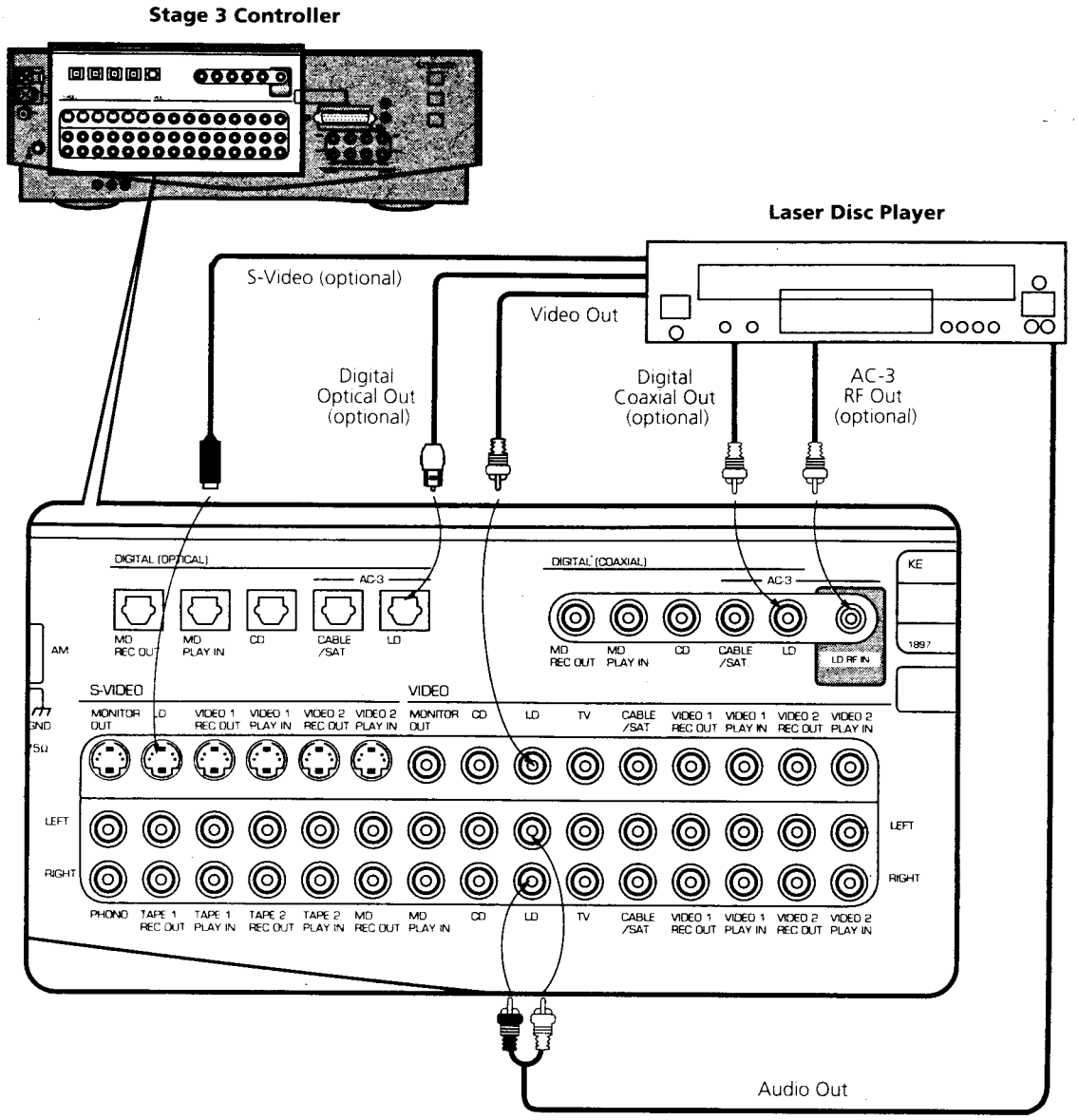
- You can use the Video 3 input (on the front panel) to connect a play-only video source, such as a camcorder, laser disc player, or another VCR.



Connecting your laser disc player

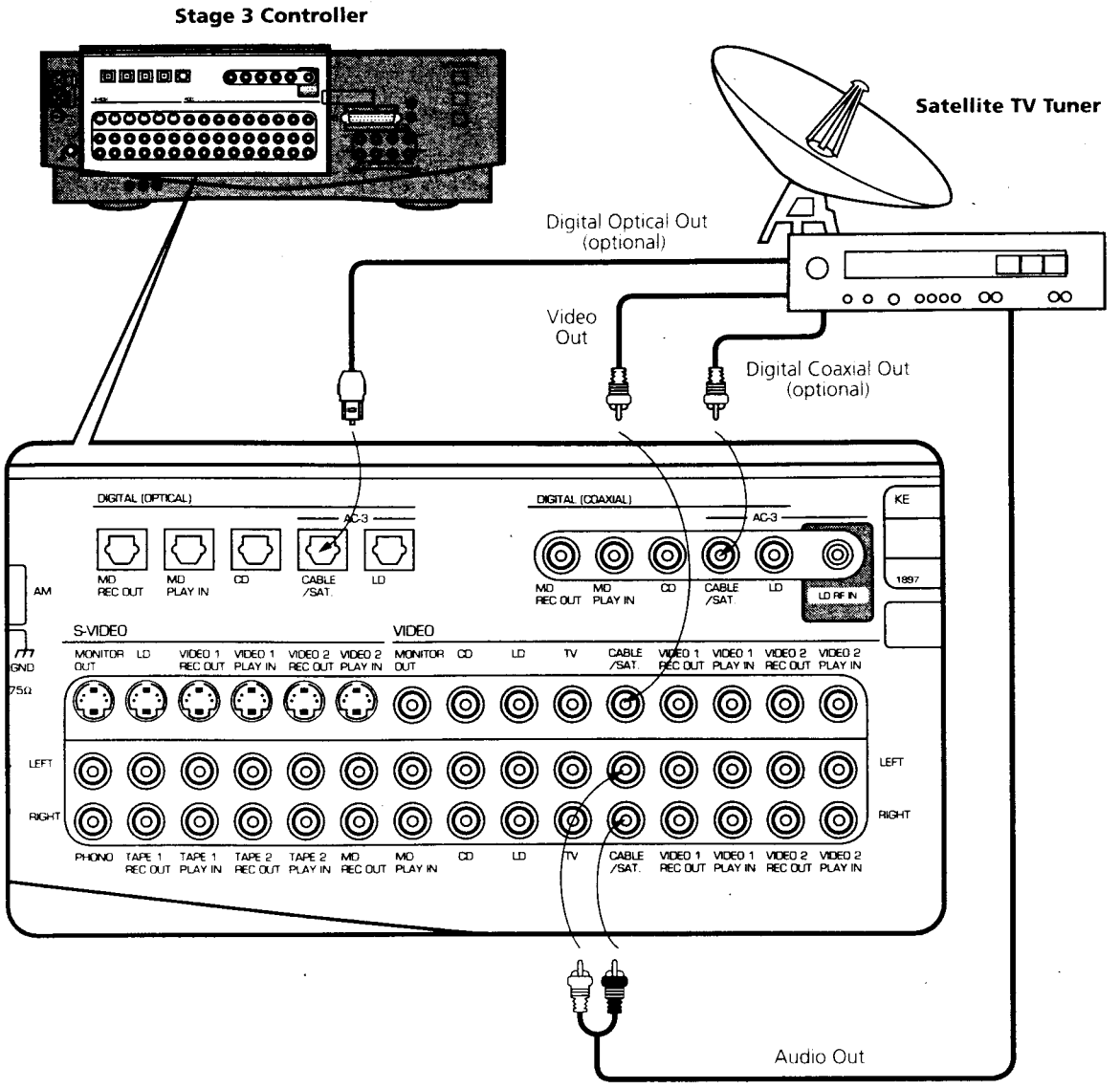
Connect the Video Out and Audio Out cables to the Stage 3 Controller. If you have Digital Optical Out, Digital Coaxial Out, AC-3 RF Out, or S-video, connect them also.

- If you use the S-video connection, do not use the Video Out jack.



Connecting your cable or satellite TV tuner

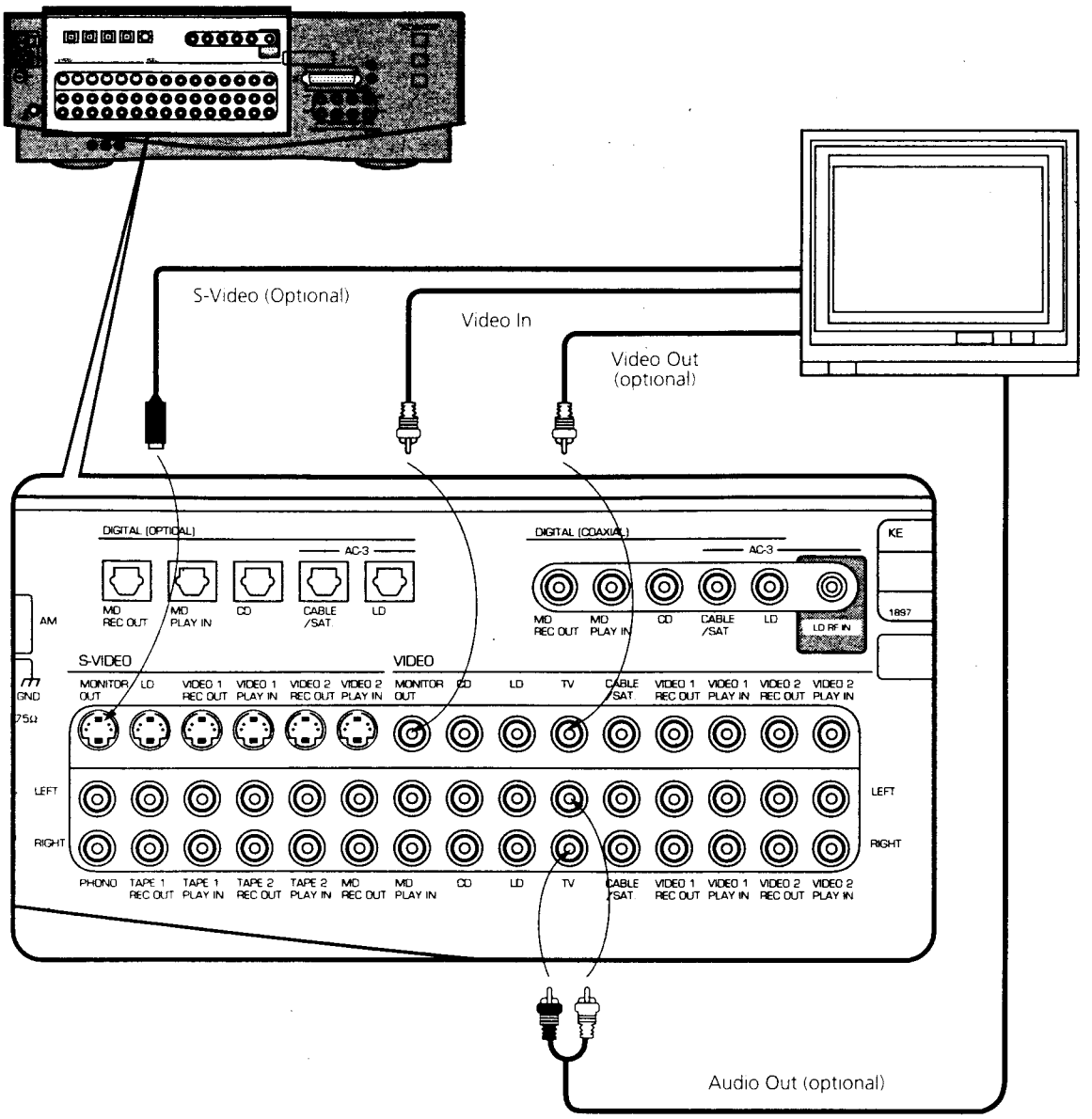
Connect the Video Out and Audio Out cables to the Stage 3 Controller. If you have Digital Optical, or Digital Coaxial cables, connect them also.

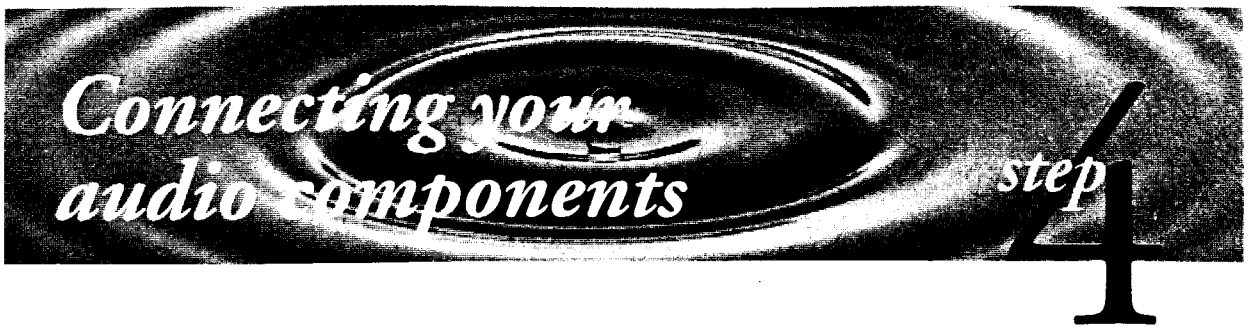


Connecting your TV

Connect the Video In cable to the Stage 3 Controller. If you have Video Out, Audio Out, or S-video, connect them also.

• If you use the S-video jack, do not use the Video In or Video Out jacks.





You can connect your turntable, CD player, 2 analog tape decks, and a MiniDisc recorder (or a third tape deck) to the Stage 3 Controller.

- Make sure that you connect all plugs firmly, so there's no sound loss or unwanted noise later.
- Whenever you connect or disconnect cables, turn off the power and unplug the power cord from the AC wall outlet to avoid damaging your unit.
- The cables are not included with the Stage 3 Controller.
- For more instructions, read the manual that came with each component.

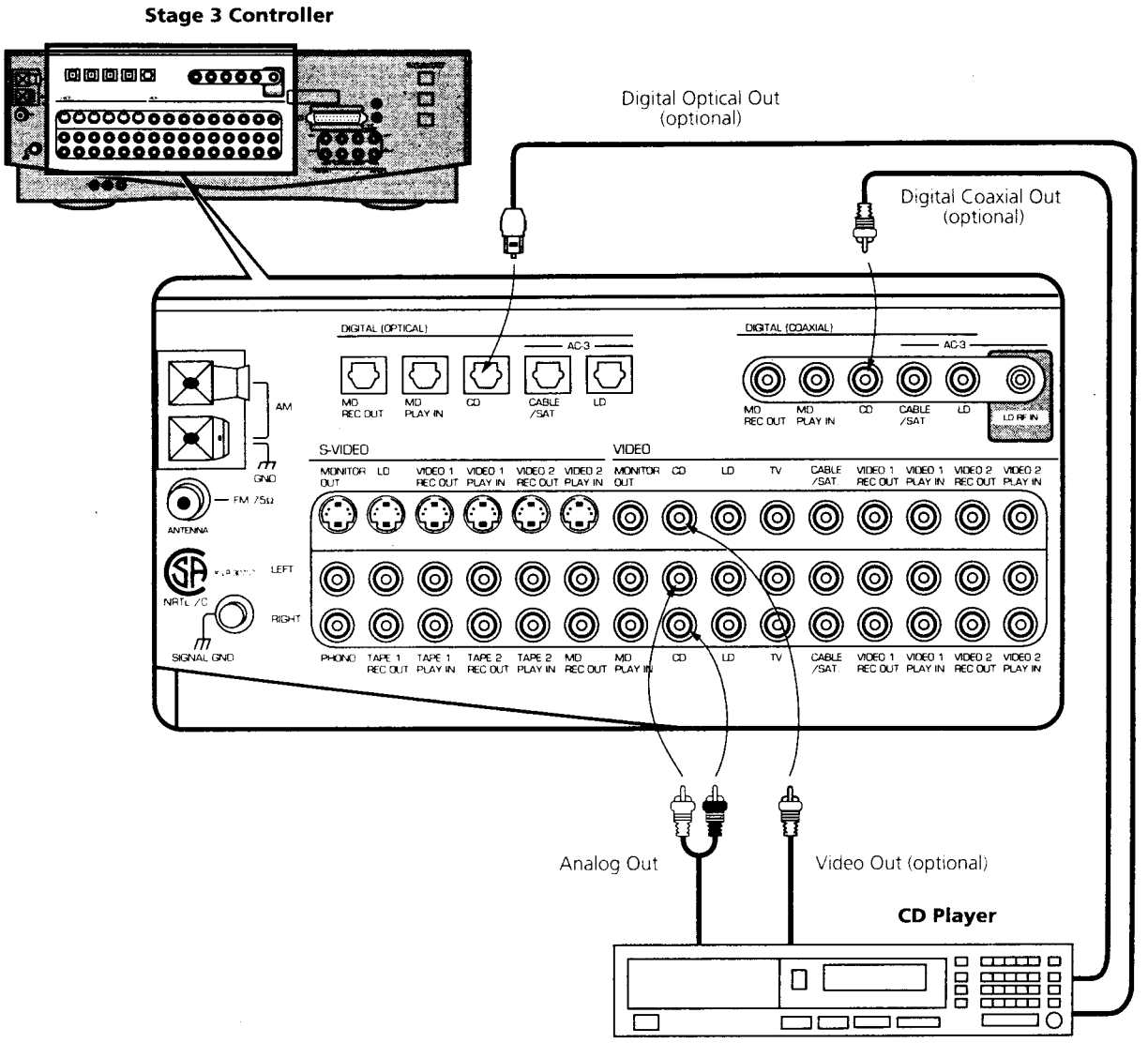
Connecting your CD player

Connect the Analog Out cable to the Stage 3 Controller. If your CD Player has Digital Coaxial Out, Digital Optical Out, or Video Out, connect them also.

Note: If you are connecting a Kenwood 10-disc CD changer, be sure to plug its power cord into one of the switched outlets on the Stage 3 Controller. This will ensure that the TouchPanel can properly control the CD changer.

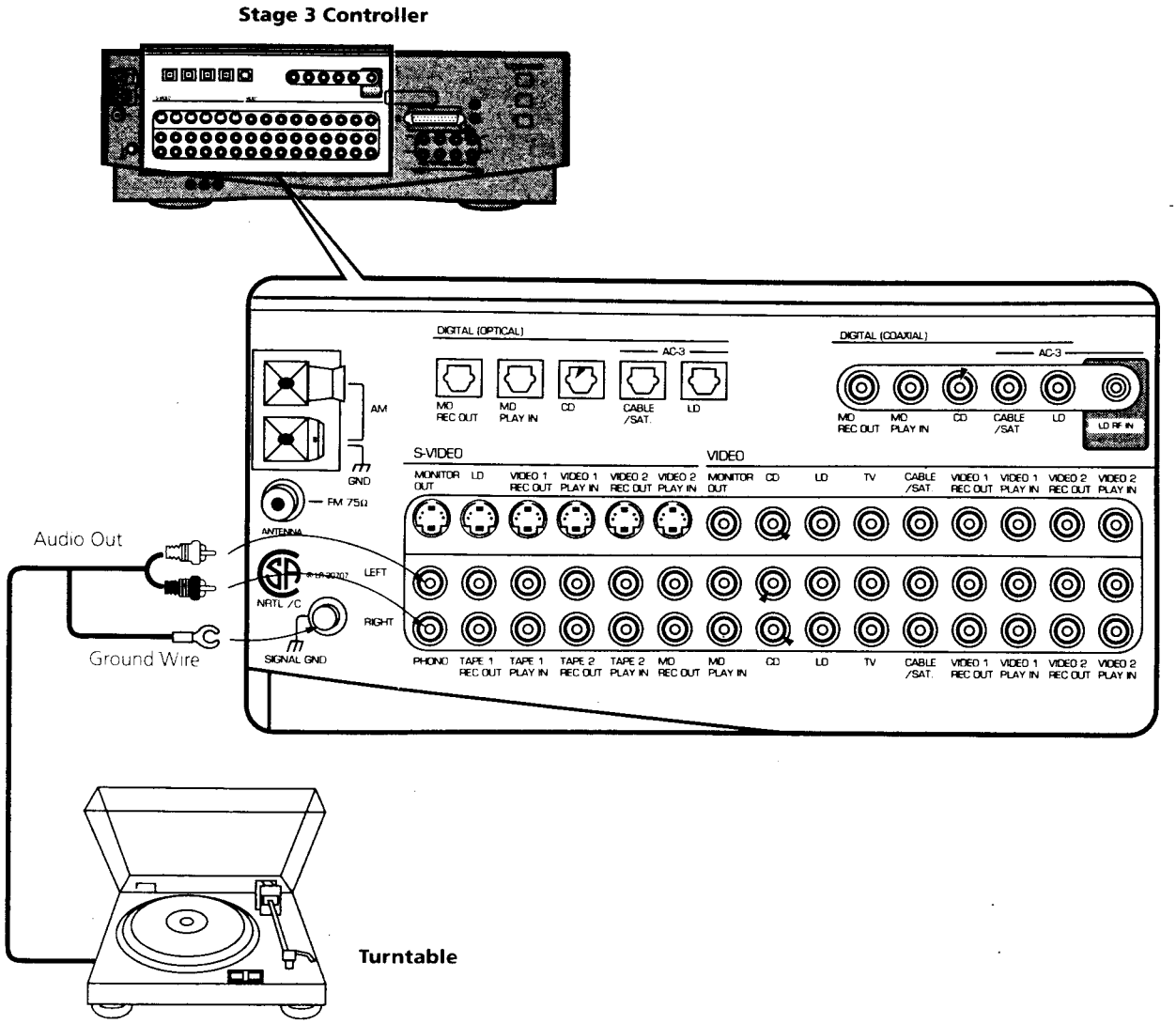
About DVD Players

You can connect a DVD player the same way you would a CD player. You cannot connect both at the same time.



Connecting your turntable

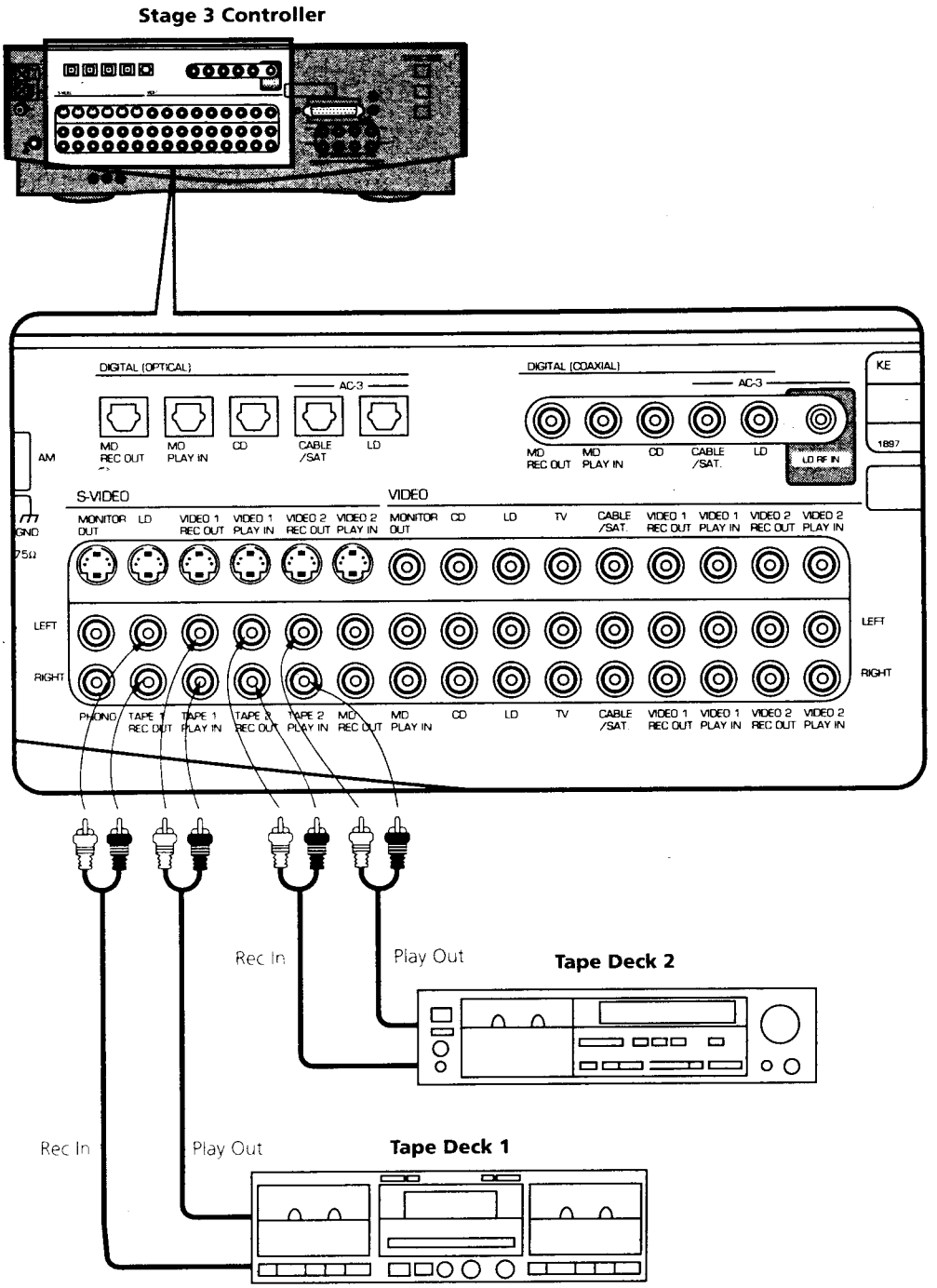
Connect the Audio Out and Ground Wire to the Stage 3 Controller.



Connecting your analog tape decks

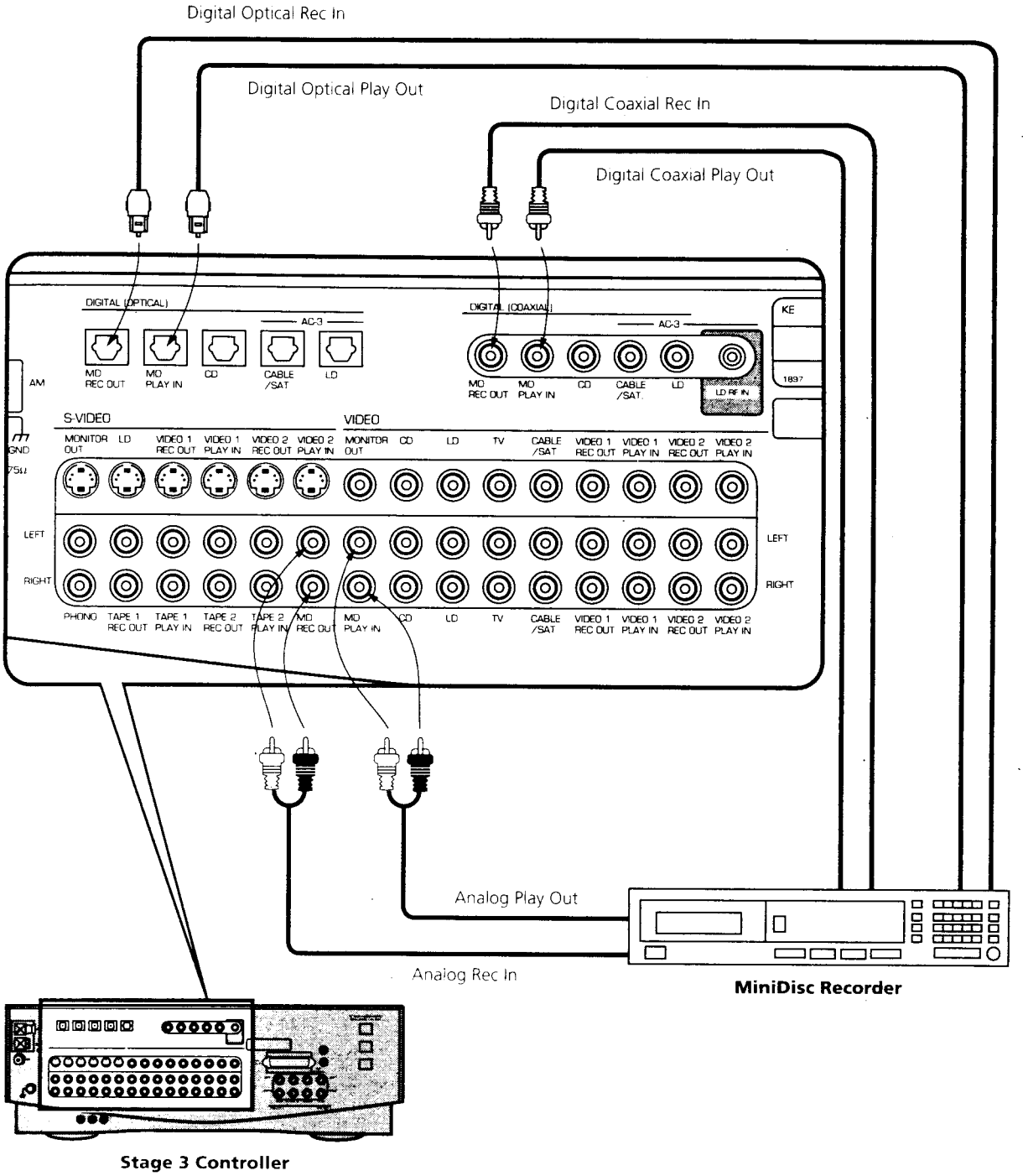
You can connect up to two analog tape decks, such as a cassette deck or reel-to-reel. Connect the Record In and Play Out cables to the Stage 3 Controller.

- If you have a Kenwood tape deck with SL16 System Control jacks (see page 32), connect it to the Tape-1 inputs.
- Read *Using your Stage 3 Controller* for instructions on how to use Tape-2 as a tape monitor input.
- If you are not using a MiniDisc recorder, you can connect a third analog tape deck to the Stage 3 Controller's analog MD Play In and MD Rec Out inputs. In this case, leave the Stage 3 Controller's digital MD inputs and outputs open.



Connecting your MiniDisc recorder

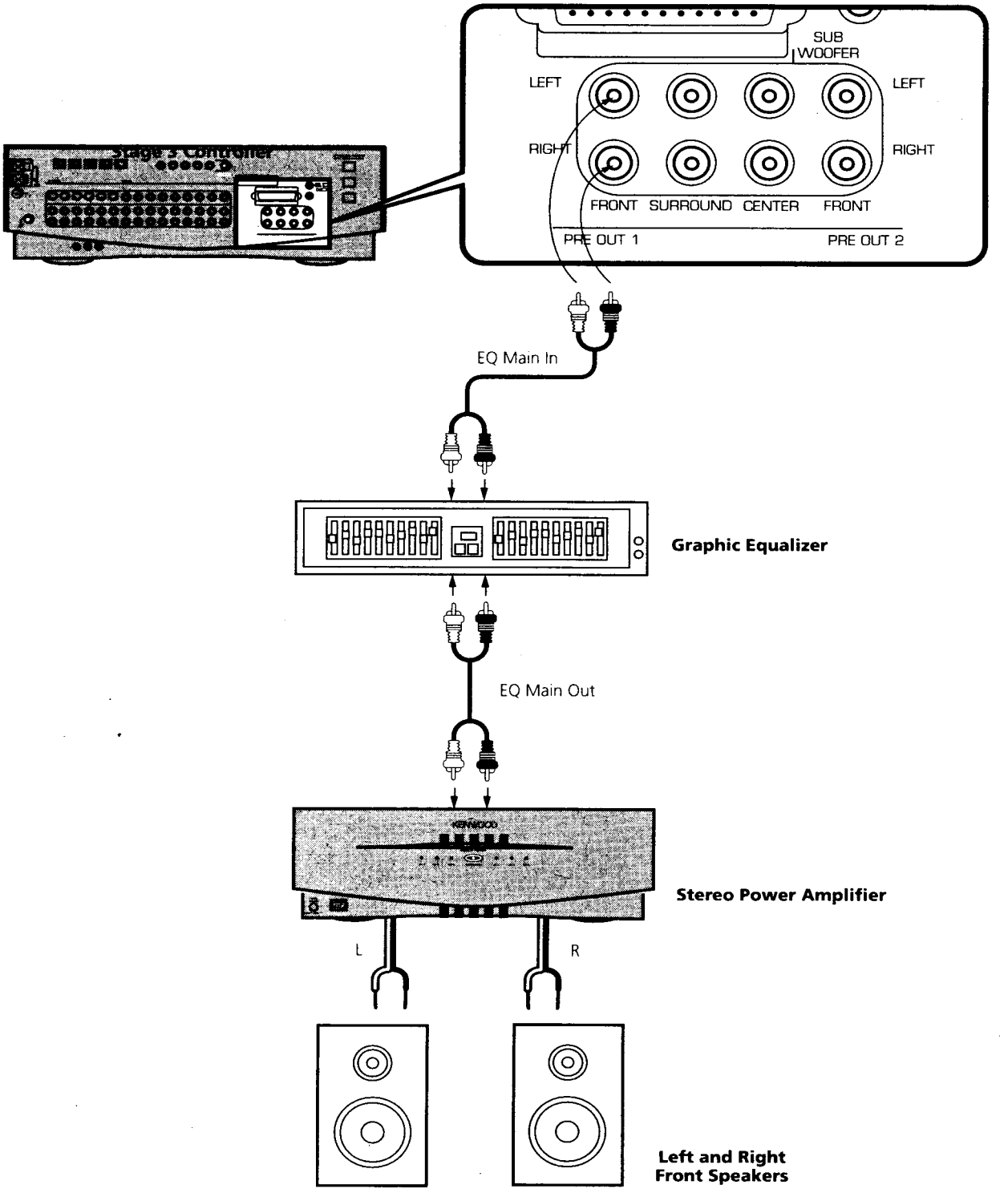
Connect the analog Play Out, Analog Record In, and any of the Digital Optical Record In, Digital Optical Record Out, Digital Coaxial Record In, or Digital Coaxial Play Out cables to the Stage 3 Controller.



Connecting a graphic equalizer

If you connect a graphic equalizer to the Stage 3 Controller, be sure to connect it between the Stage 3 Controller's Pre Out 1 or Pre Out 2 and your power amplifier's inputs.

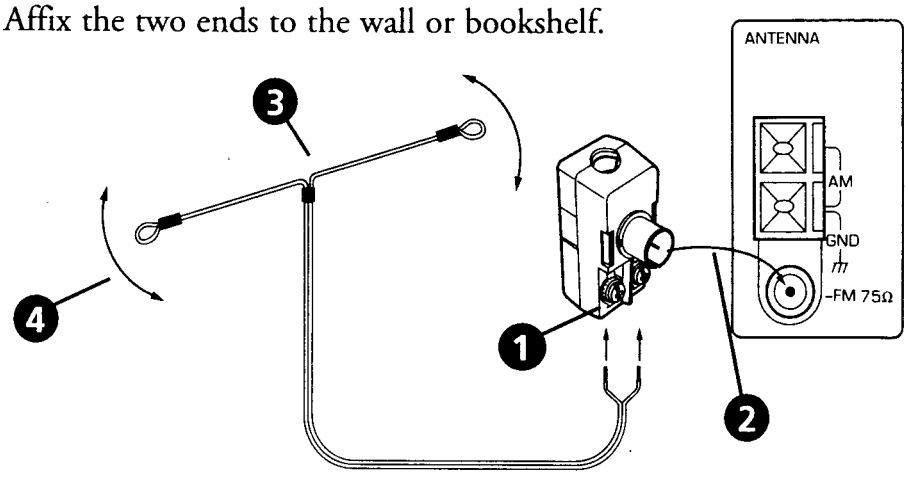
- IMPORTANT: Do not connect a graphic equalizer to the Tape 2 jack and configure it as a tape monitor input. This could overload the Stage 3 Controller's digital circuitry, causing distortion and interfering with Dolby Surround Pro Logic performance.



Using the FM indoor antenna

You can use the FM indoor antenna we've supplied until you can install an outdoor antenna. When you do, remove the indoor antenna.

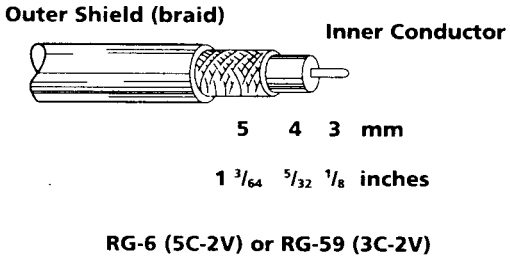
1. Connect the loose ends of the antenna to the screw terminals on the antenna adaptor.
2. Connect the antenna adaptor to the Stage 3 Controller antenna input.
3. Fully extend the antenna and place it along a wall or bookshelf.
4. Adjust the antenna to find the position that provides the best reception.
5. Affix the two ends to the wall or bookshelf.



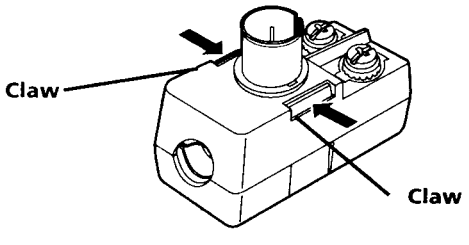
Using an FM outdoor antenna

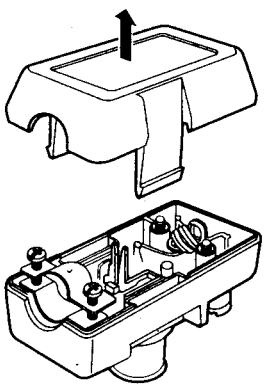
For the best reception, install an FM outdoor antenna. Use a coaxial cable for the connection between the outdoor antenna and the FM antenna adaptor.

1. Prepare the cable:

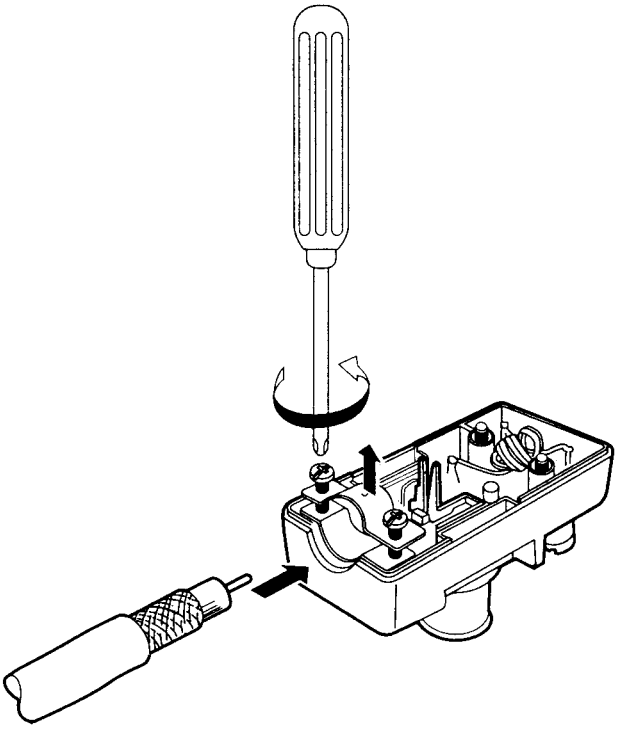


2. Open the antenna adaptor. Push the claws together (with your fingers) to release the lock and pull off the cover.

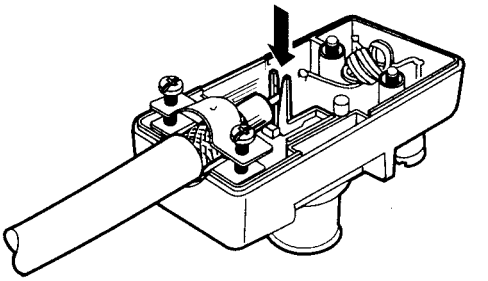




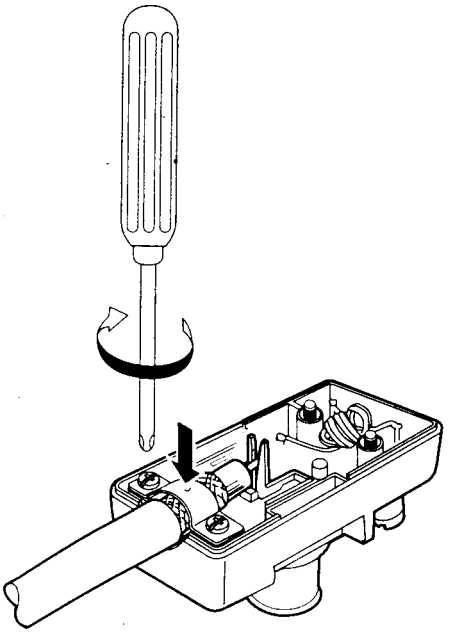
❸ Using a Phillips screwdriver, loosen the screws holding the clamp in place, and insert the cable into the clamp.



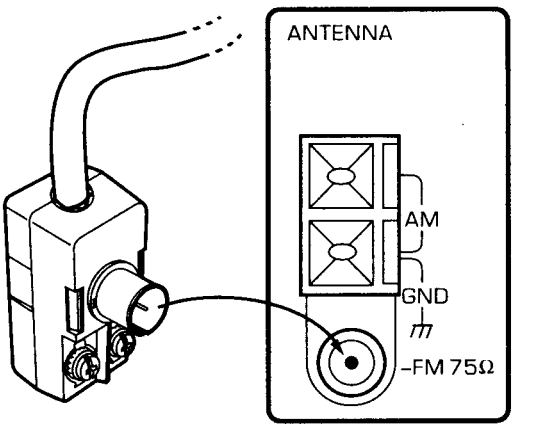
❹ Make sure that the cable's braided insulation contacts the clamp, and that the inner conductor fits into the 'V' groove of the center pole.



❺ Tighten the clamp screws and replace the adaptor cover.



❻ Connect the adapter to the Stage 3 Controller Antenna input.



Connecting components for TouchPanel Control

Step 6

The TouchPanel can control most of the components in your home theater, whether they are made by Kenwood or by another manufacturer.

Connecting Kenwood components

Many Kenwood components use System Control connections to communicate with each other. Newer Kenwood products use SL16 jacks, while older ones use XS8 or XS jacks. The TouchPanel controls SL16-type components using System Control connections wired to the Stage 3 Controller. It controls other Kenwood components, including XS8 components using the Stage 3 Controller's IR repeater.

Before you connect your components, check the System Control jacks on the back of your Kenwood components to see if they are labeled 'SL16' or 'XS8(SL16)'.

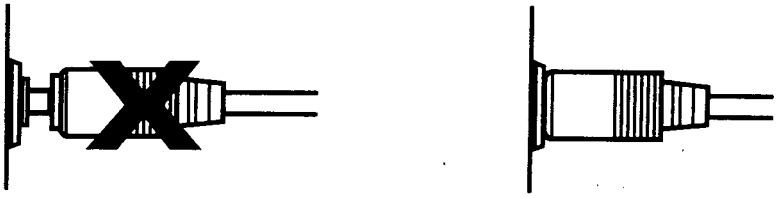
About XS8 components

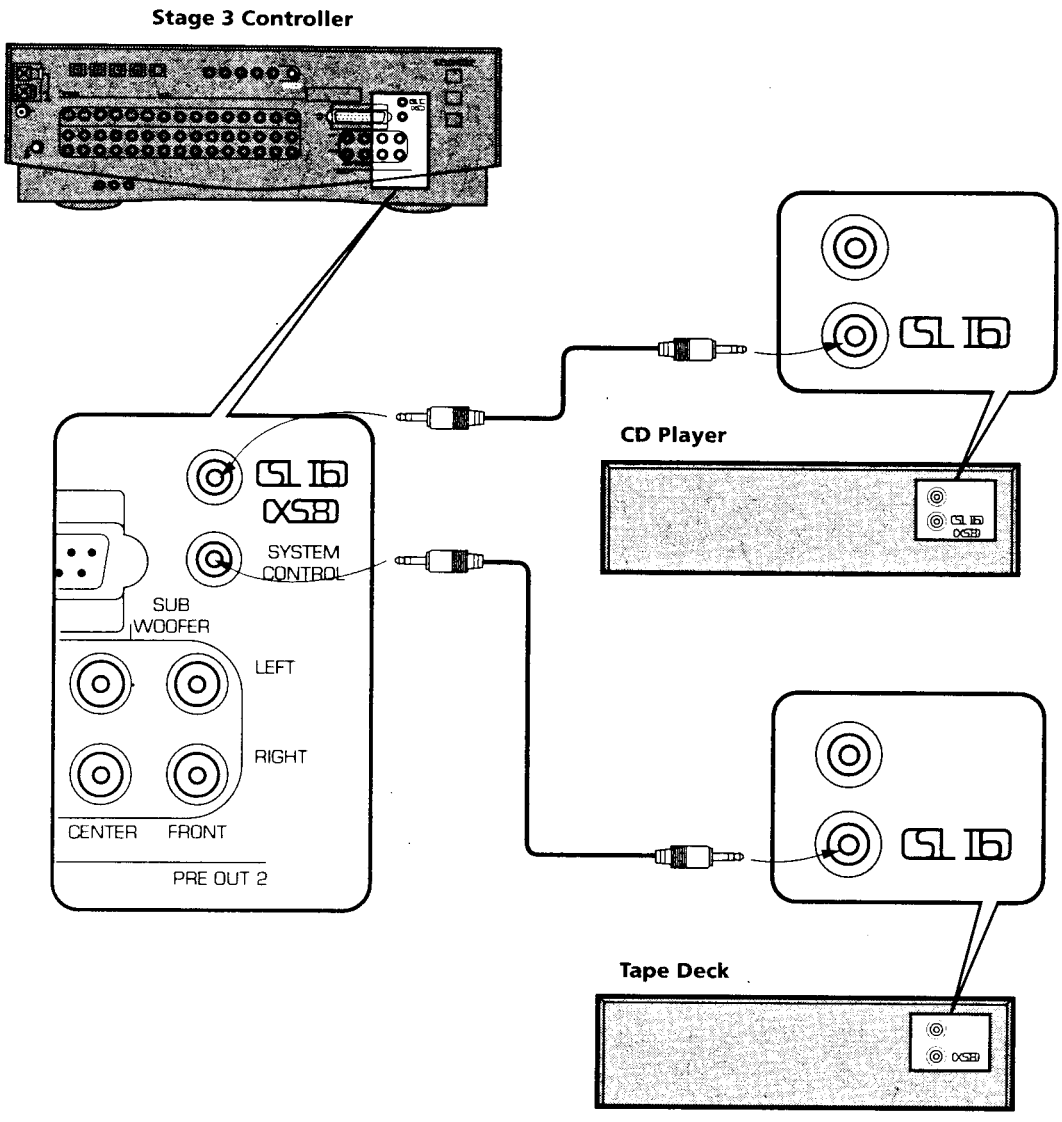
If you have a Kenwood XS8 cassette deck that is not IR-controllable and are using NO SL16 Kenwood source components with the Stage 3 Controller, you can set up the tape deck for XS8 System Control. Connect it to the Tape 1 inputs and follow the instructions on the next page as if it were an SL16 component. (This is the only situation in which an XS8 component can be controlled by the TouchPanel.)

Kenwood SL16-type components

1. If any component is labeled 'XS8/(SL16)', read its owner's manual and set it to the SL16 setting.

2. Connect these components as shown below. Be sure to push the plugs all the way in.



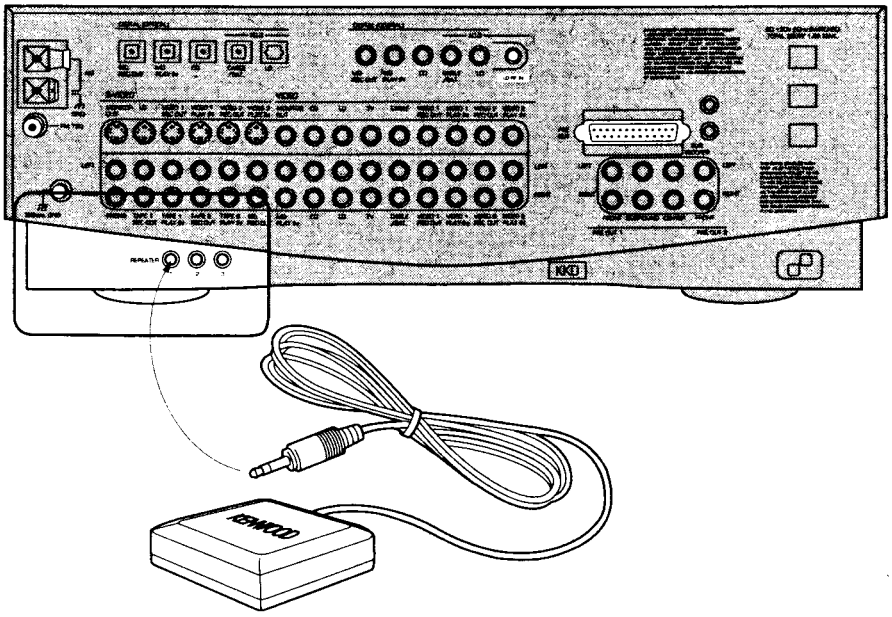


3. Read page 51 to set up the TouchPanel to control these components.

Other components

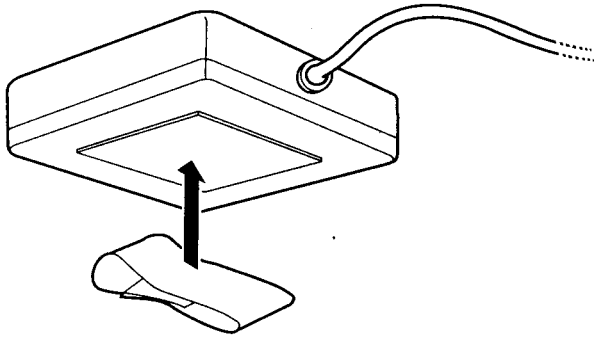
The Stage 3 Controller can control any component that has its own wireless remote (whether Kenwood or not). In a few instances, a component that does not have its own wireless remote may still work (read the component's owner's manual for more information). Most components that don't have a wireless remote cannot be controlled by the TouchPanel.

1. Plug the IR repeater into one of the Stage 3 Controller's Repeater jacks 1, 2, or 3.



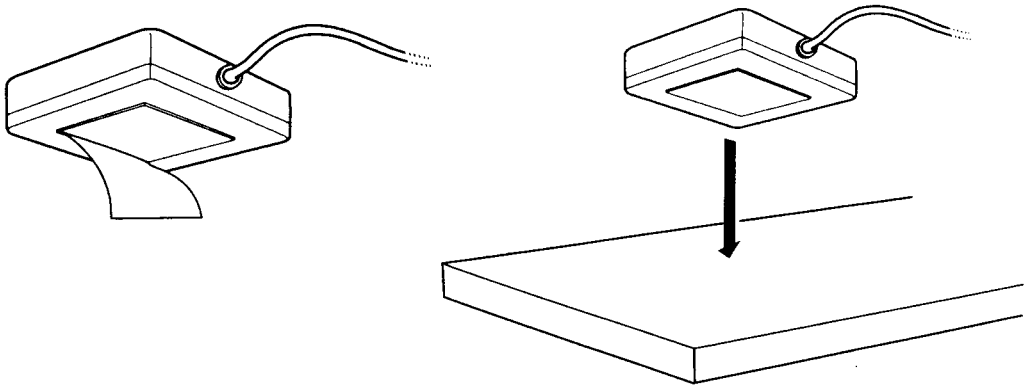
2. Using a small piece of Scotch tape or masking tape, temporarily mount the repeater on a surface near your components (make sure the tape does not cover the top or sides of the repeater).

- The repeater's coverage pattern is very broad, so its location in the room isn't critical. However, in rare cases you may have to experiment to find a location that works with all of your components.



❸ Continue through this guide until your components are set up and operating.

❹ Later, when you are sure that the TouchPanel operates all of your IR-controllable components and accessories, peel the backing off of the double-stick tape on the the repeater and mount it.



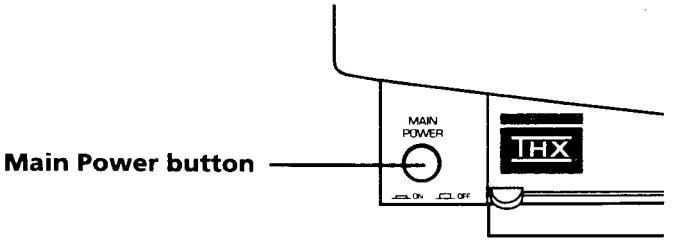
Controlling accessories

The TouchPanel can control up to 6 accessories (such as lights, motorized projection screens, and so on). Since the TouchPanel controls the accessories using the IR repeater, make sure that the repeater is properly connected (read the section above) before setting-up the TouchPanel to control the accessories. Read *Using your Stage 3 Controller* to learn how to control accessories.

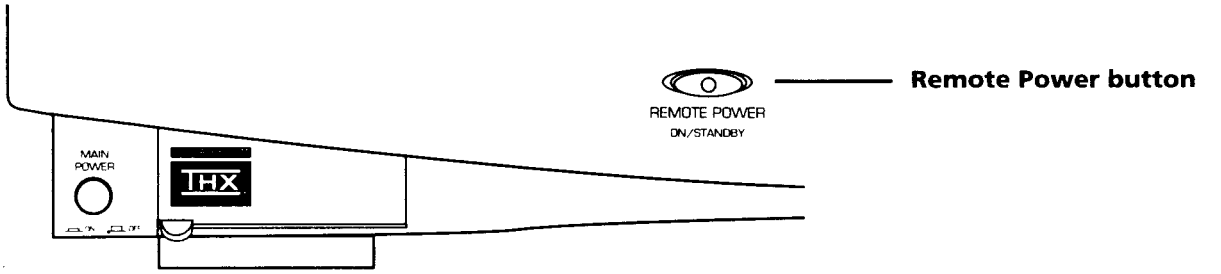
Turning the power on for the first time

step 7

1. Check that all of the connections have been made properly.
2. Plug the power cord into an AC wall outlet.
3. Push the Main Power button on the lower left corner of the front panel.



4. Touch the Remote Power button on the front panel.



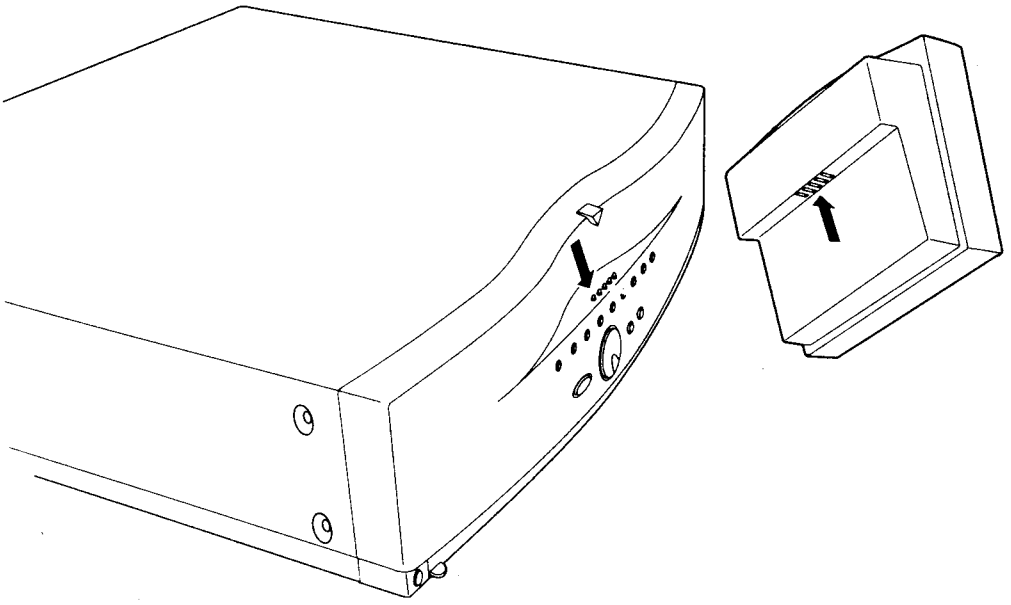
5. When you are done Using your Stage 3 Controller, do not turn the Main Power button off. Doing so will shut off the battery charge compartment.

Preparing the TouchPanel

Step 8

The TouchPanel can operate the Stage 3 Controller either remotely or while attached to its Dock on the front panel.

- Be sure to keep the metal contacts on the Dock and TouchPanel clean.
  Dirty contacts may interfere with operation of the TouchPanel while it is attached to the Dock.

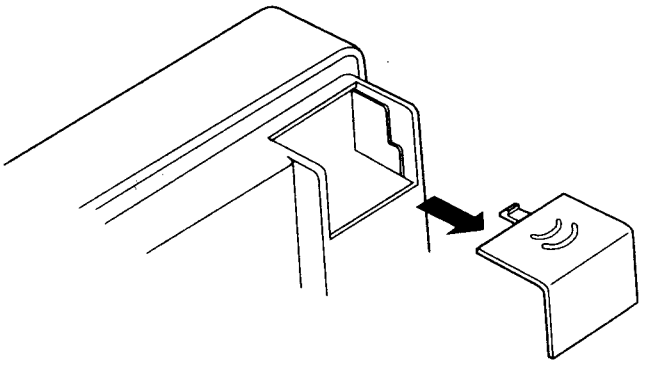


About the TouchPanel

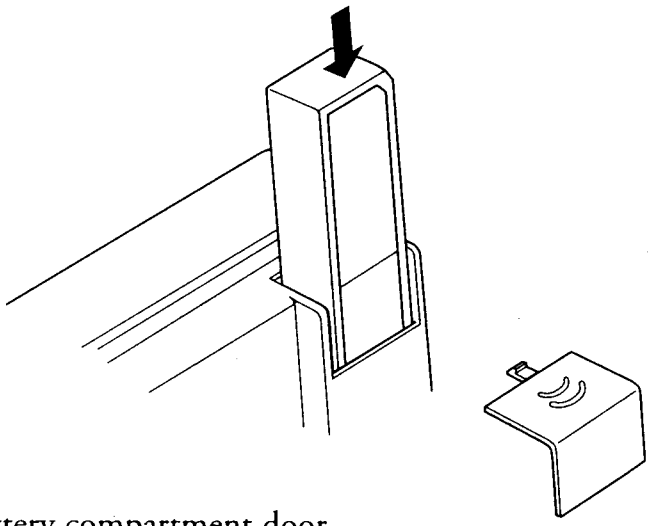
The TouchPanel is a precision-engineered device, and should be handled carefully.
Do not drop the TouchPanel or its rechargeable batteries onto a hard surface.

Installing the battery in the TouchPanel

1. Remove the battery compartment door by pressing down on the ridged area and sliding it off in the direction of the Arrow.



2. Insert the end of the battery with the contacts into the battery compartment, with the contacts facing up (towards the screen side of the TouchPanel) until it clicks into place.



3. Replace the battery compartment door.

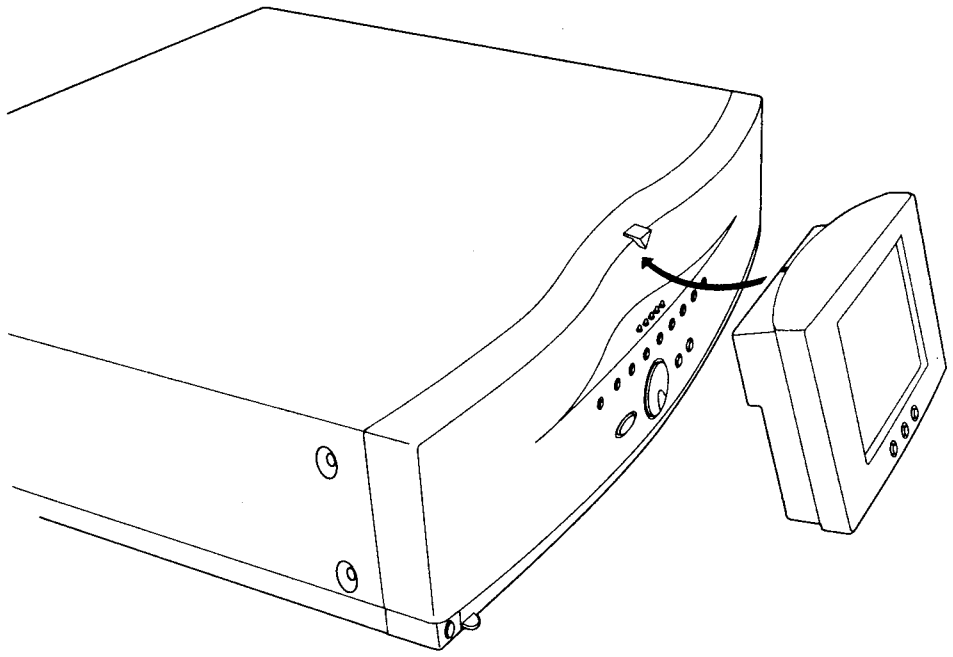
This battery should be sufficiently charged to finish setting up the system. If the low battery indicator lights while you're setting up the system, replace the battery with the fully charged one from the charging compartment. If that battery is not fully charged (the Battery Indicator is red), you have two options:

Option 1: Remove the low battery from the TouchPanel and perform the rest of the setup with the TouchPanel docked to the Controller (do not dock the TouchPanel with a low battery installed in it).

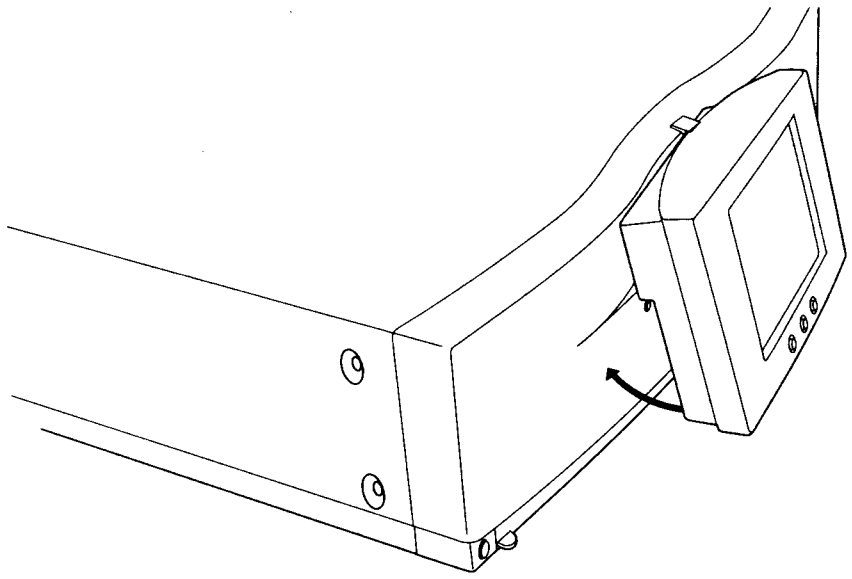
Option 2: Wait until the battery in the charging compartment is fully charged (the Battery Indicator light is green) and install it in the TouchPanel.

Attaching the TouchPanel to the Dock

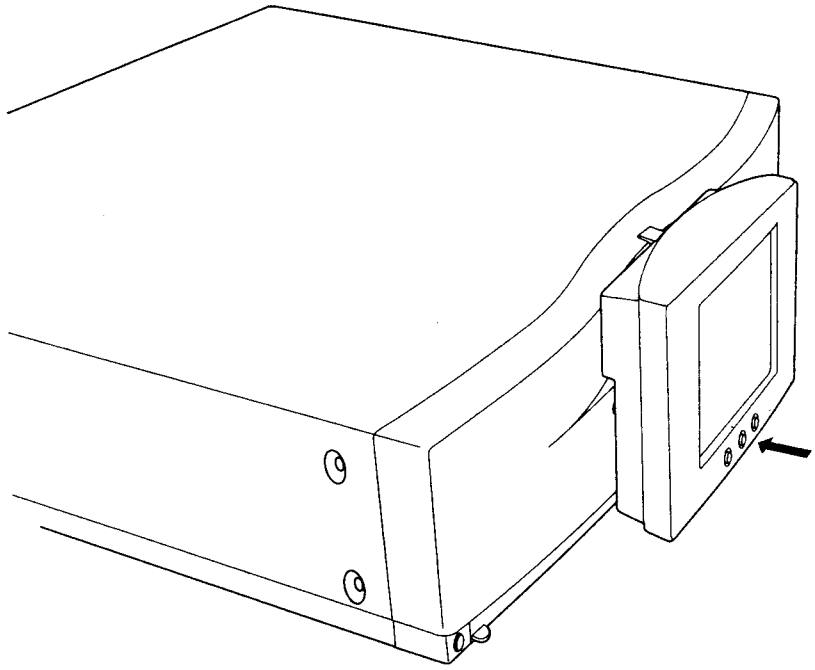
1. Hold the TouchPanel with its top toward the Dock.



2. Insert the TouchPanel onto the Dock so that the TouchPanel lock is inside the slot on top of the TouchPanel



❸ Gently push the bottom of the TouchPanel against the controller until it locks in place.

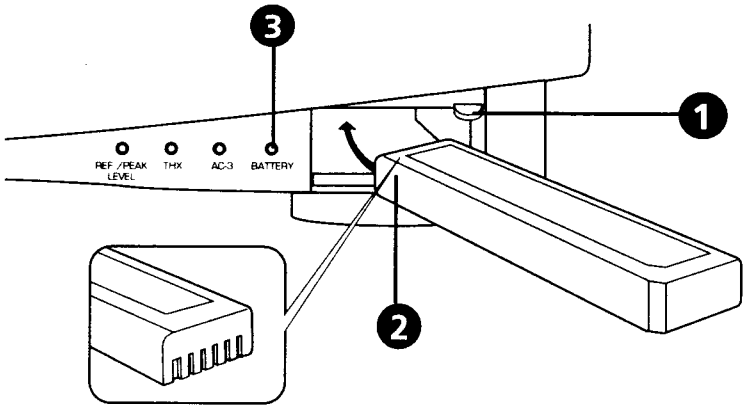


- To remove the TouchPanel from the Dock, reverse the above steps.
- The Stage 3 Controller unit will maintain the TouchPanel battery's charge level whenever the TouchPanel is attached to the Dock.
- Do not dock the TouchPanel if its battery is low. (displaying the low battery warning); this may diminish battery life. Instead, remove the battery from the TouchPanel and exchange it with the fully charged battery in the charge compartment before docking the TouchPanel.

Charging a battery

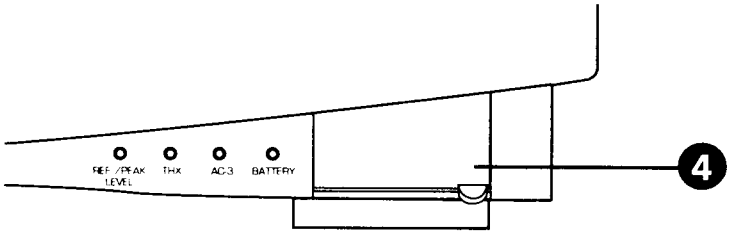
The Stage 3 Controller has a charging compartment for the extra battery. If the battery in the TouchPanel runs down, you can swap it with the extra battery and continue to use the TouchPanel to control the system.

1. Open the Battery Compartment door by sliding it up.
2. Insert the end of the extra battery with the contacts into the Battery Compartment, with the contacts facing up until it locks into place.
3. The battery light next to the door will glow red.
4. Close the Battery Compartment door.

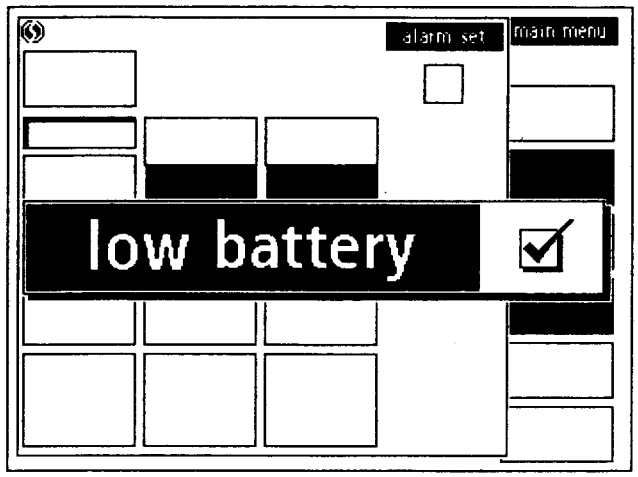


The battery will fully charge in 2-4 hours.

- The Battery Light will change to green when the battery has been fully charged.
- Since the compartment will keep the battery fully charged, we recommend that you leave the extra battery in the charger compartment until it is needed.



The TouchPanel screen will display the following message when its battery needs recharging:



- Exchange the battery with the fully-charged extra battery in the controller's Battery Compartment.

About battery life

Under constant use (with the LCD display constantly lit), a fully-charged battery will last 4 to 5 hours before it needs to be recharged. Under normal use (the LCD display set to shut off a few seconds after it's used), the battery should last much longer. See "Setting the LCD Sleep Time" for instructions on adjusting the TouchPanel to help maximize battery life.

- The batteries can be recharged and reused approximately 250 times. You will know a battery is nearing the end of its life when its use time shortens.
- Only use DURACELL DR-17 batteries.

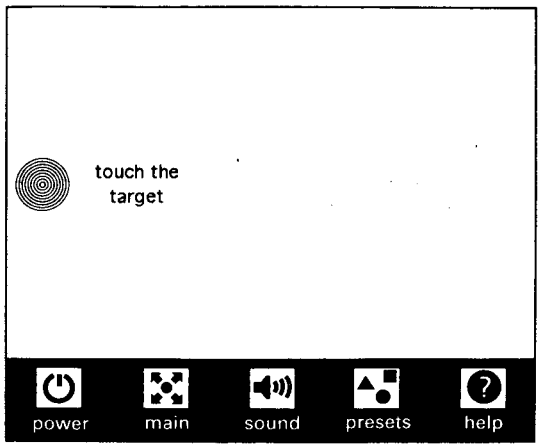
About the rechargable batteries

- When batteries need recharging, recharge them as soon as possible. Also, do not expose the batteries to high temperatures. This will help the batteries maintain their charge.
- For more information about batteries, contact Duracell directly at 800-551-2355.

When you put the battery in for the first time, the TouchPanel displays the Touch The Target screen. This screen helps calibrate the TouchPanel so it can detect the exact center of each button.

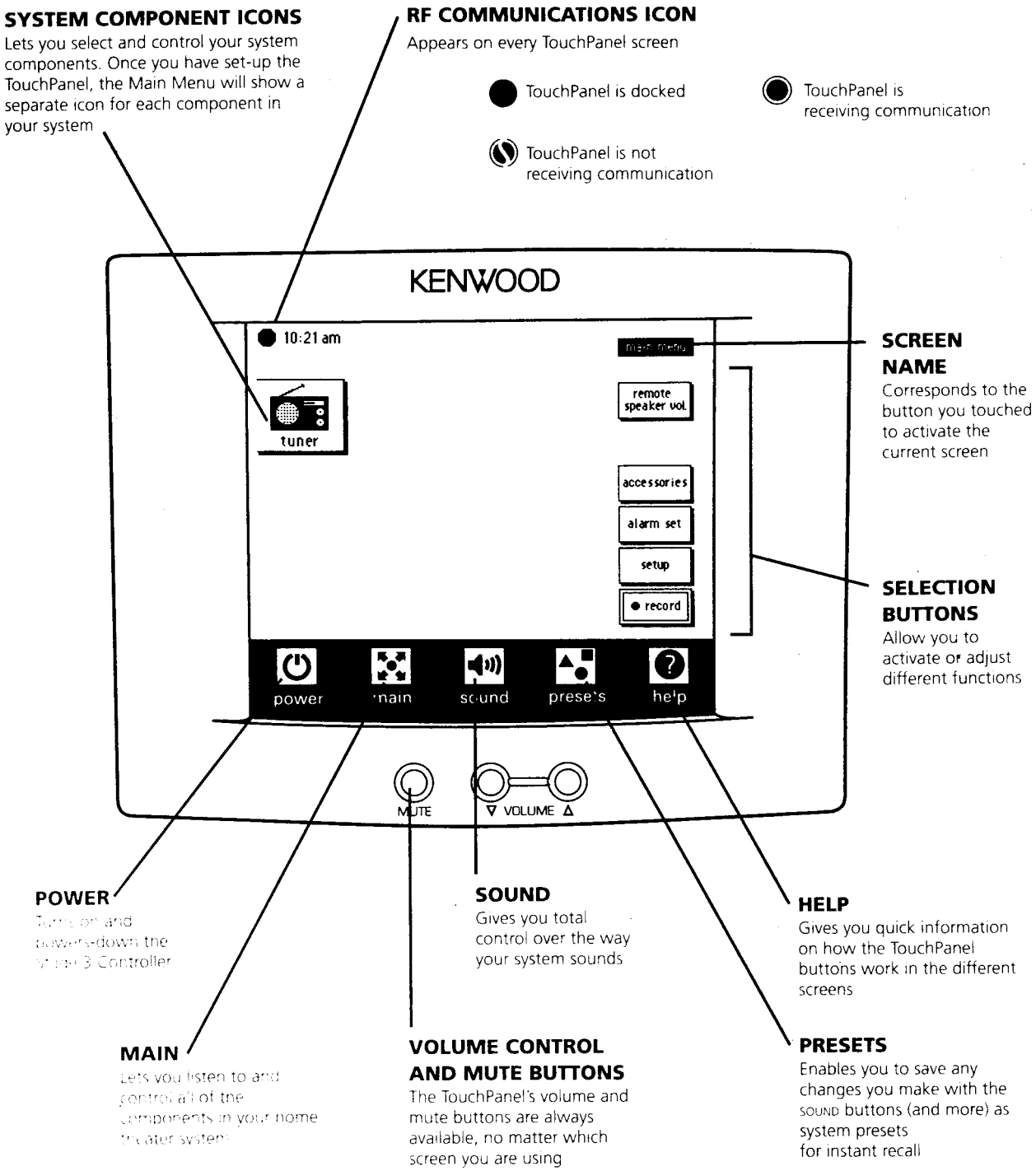
Calibrating the TouchPanel

Touch the center of each target as it moves around the screen. You will touch the target 4 times. If you're not satisfied with the result, or you missed one of the targets, you can always start over from the Touch Screen button.



About the main menu

After you are finished calibrating the TouchPanel, the system displays the Stage 3 Title Screen for a short time, then the Main Menu screen.


SYSTEM COMPONENT ICONS
Lets you select and control your system components. Once you have set-up the TouchPanel, the Main Menu will show a separate icon for each component in your system
RF COMMUNICATIONS ICON
Appears on every TouchPanel screen
TouchPanel is docked
TouchPanel is receiving communication
TouchPanel is not receiving communication
KENWOOD
10:21 am
tuner
remote speaker vol
accessories
alarm set
setup
record
power
main
sound
presets
help
MUTE
VOLUME
SCREEN NAME
Corresponds to the button you touched to activate the current screen
SELECTION BUTTONS
Allow you to activate or adjust different functions
POWER
SOUND
Gives you total control over the way your system sounds
HELP
Gives you quick information on how the TouchPanel buttons work in the different screens
MAIN
VOLUME CONTROL AND MUTE BUTTONS
The TouchPanel's volume and mute buttons are always available, no matter which screen you are using
PRESETS
Enables you to save any changes you make with the SOUND buttons (and more) as system presets for instant recall

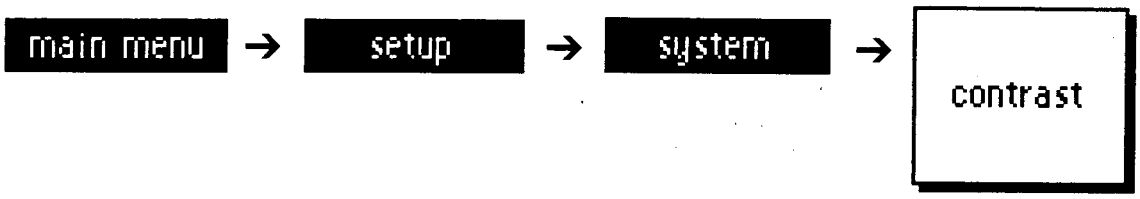
About the auto-off feature

The TouchPanel turns itself off after a period of time if it hasn't been used. This feature saves battery power, and can be adjusted (see page 48). To reactivate the TouchPanel, simply touch it again.

Changing the LCD contrast

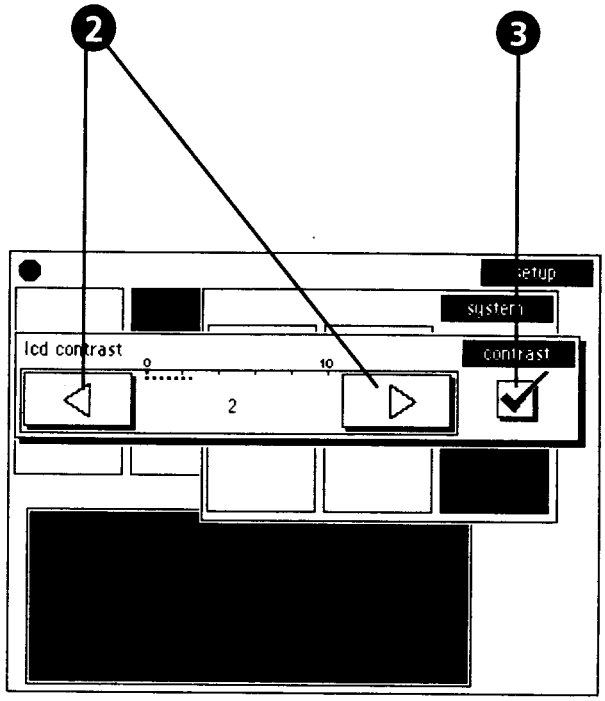
Lighting conditions can affect your view of the TouchPanel screen. With this feature you can adjust the contrast for the best possible view.

1. To get to the LCD Contrast screen, touch these buttons:



2. Adjust the contrast using the Arrow buttons.

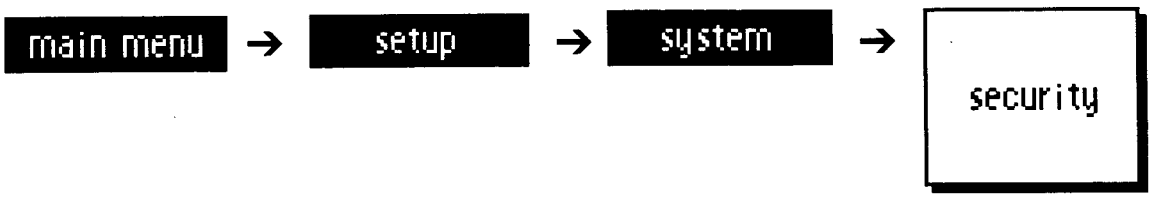
3. Touch the CHECK-MARK to save your changes.



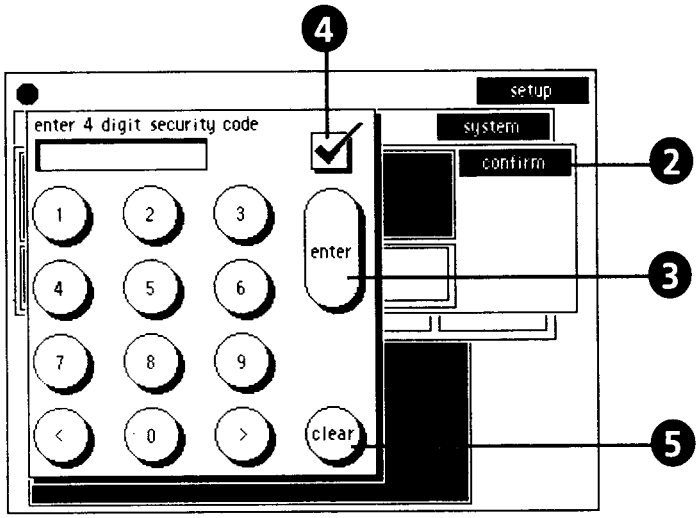
Creating a security code (optional)

You can set up a security code to restrict access to the Stage 3 Controller's set-up functions and default values. With a security code, the TouchPanel requests a 4-digit number before you can change any system, component, speaker, or DSP Logic default settings. You don't need to know the security code to operate all of the Stage 3 Controller's features. You can still make temporary changes through the Sound menu and even save those changes as a system preset (a way to save a temporary system changes for future use).

❶ To get to the Security screen, touch these buttons:



❷ Touch YES on the Confirm screen. The TouchPanel displays the calculator pad.



❸ Enter a four-character security code and touch the ENTER key.

❹ Touch the CHECK-MARK to save the security code.

No change is made if you use the CHECK-MARK before the ENTER key.

To turn off the security code

1. To turn off the security code, touch these buttons:

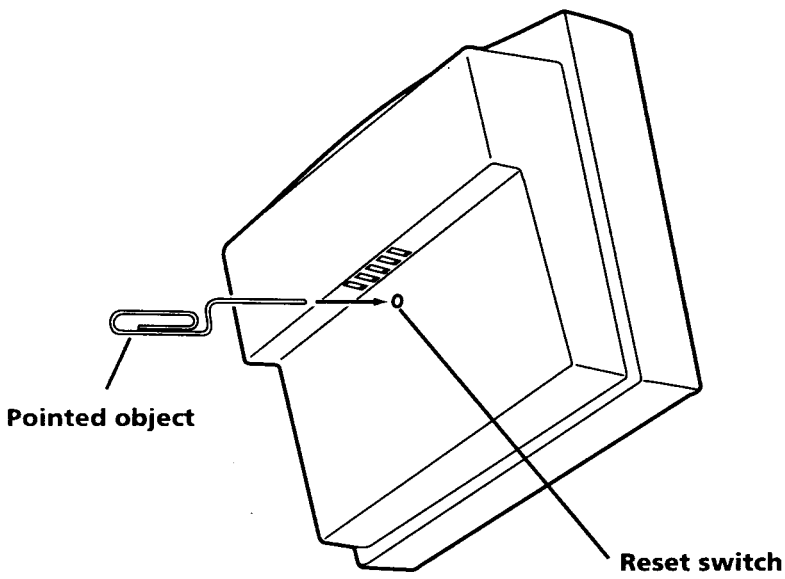
main menu → setup → system → security

(You'll have to enter your security code at the Setup screen.)

2. Touch NO on the Confirm screen to turn off the security code..

If you forget your security code

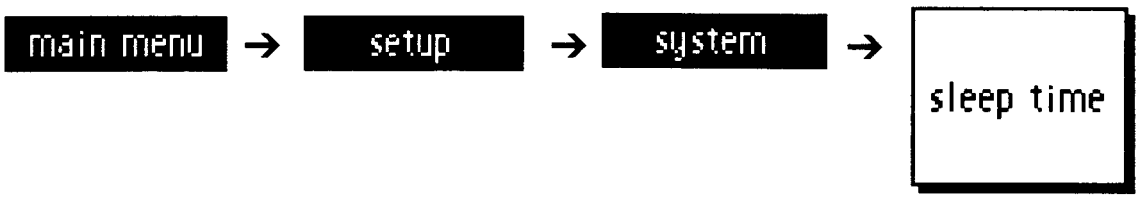
If you forget the security code, you can re-set it. Hold down the MUTE button and press the RESET button on the back of the TouchPanel case with a paper-clip or other pointed object. You can set another security code after re-calibrating the screen.

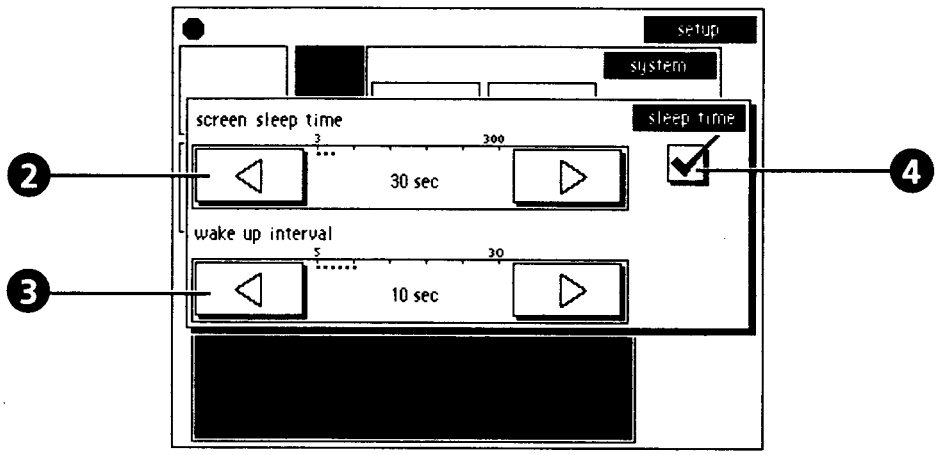


Setting the LCD screen saver

You can set the TouchPanel so that its screen turns off after it hasn't been used for a certain period of time. This helps conserve battery life. You can also determine how often the Stage 3 Controller updates the TouchPanel about the system's status. Setting a longer update interval also helps conserve battery life, but means that the TouchPanel may not read-out the system's current status when it first wakes-up. You determine the specific time intervals with the Sleep Time feature.

❶ To get to the Sleep Time screen, touch these buttons:





❷ Use the Arrow buttons to change the screen sleep time (the time it takes the TouchPanel to turn-off after its last use).

❸ Use the Arrow buttons to change the wake up interval (how often the Stage 3 Controller updates the TouchPanel about the system's current status).

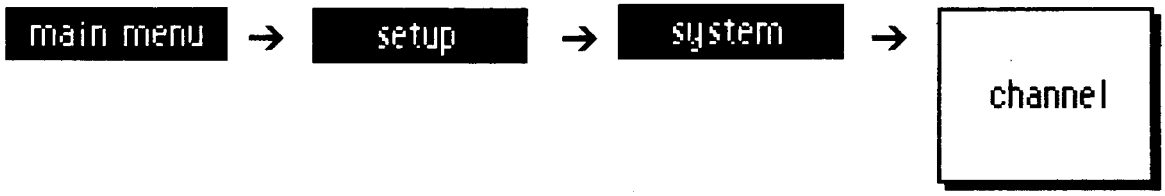
❹ Press the CHECK-MARK to save the changes.

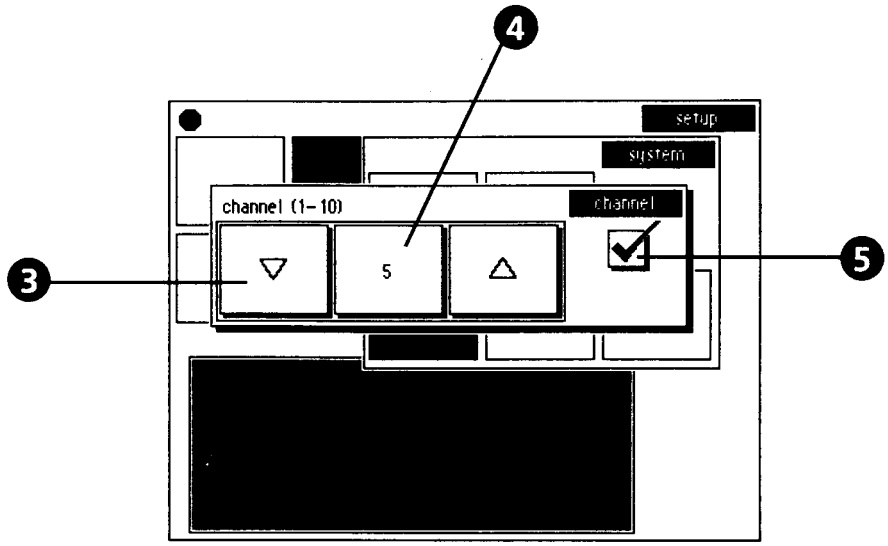
Changing the communication channel

It isn't likely, but if the TouchPanel is having trouble communicating with the controller, you can change the communication channel. (See 'Troubleshooting' in *Using your Stage 3 Controller* for help with communication problems).

1. Connect the TouchPanel to its Dock on the controller.

2. To get to the System screen, touch these buttons:





3. Use the Arrow buttons to change the channel number. You can choose any number between 1 and 10. Make sure it's different than the one currently displayed on the NUMBER (#) button.

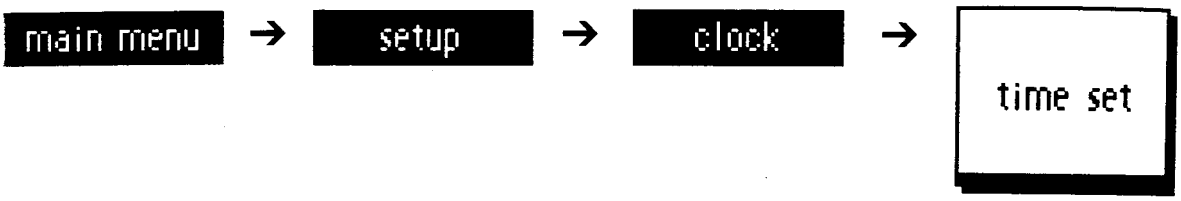
4. If you want, you can touch the NUMBER button to use the calculator pad to change the channel number.

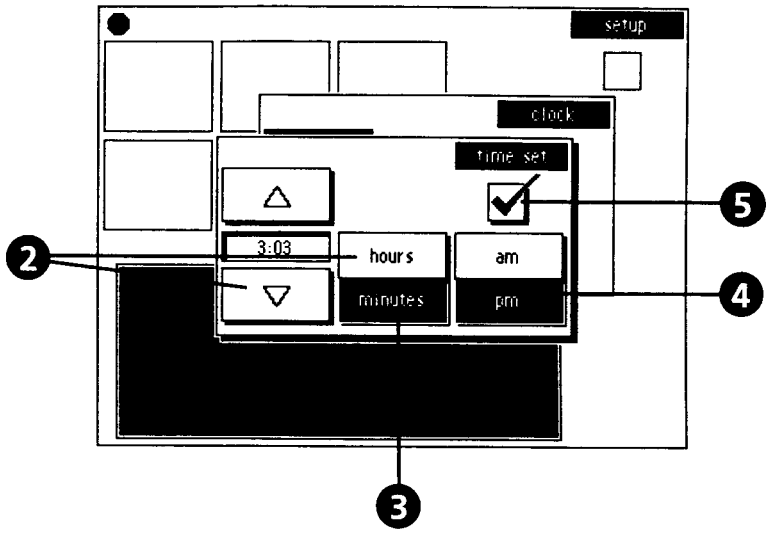
5. Touch the CHECK-MARK to save the settings.

Setting the time

The TouchPanel displays the time in the upper left corner of the Main Menu.

❶ To get to the Time Set screen, touch these buttons:





❷ To change the hour, touch the HOURS button, then use the Arrow buttons to increase or decrease the time.

❸ To change the minutes, touch the MINUTES button, then use the Arrow buttons to increase or decrease the time.

❹ Touch the AM or PM buttons to set the time of day.

❺ Touch the CHECK-MARK to save the changes.

NOTE: If power to the Controller is interrupted, or if you turn off the main power switch, you must reset the correct time.

Setting up audio and video components

step 10

In this step, you'll prepare the Stage 3 Controller to work with the different components in your system. Once set up, each component will have its own icon on the Main Menu.

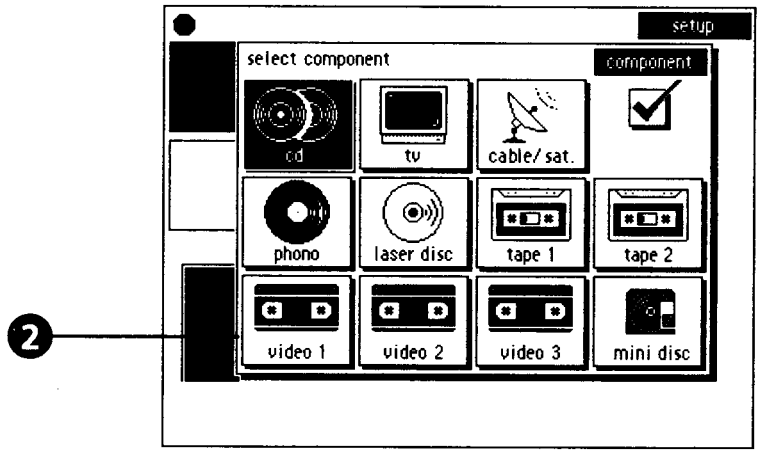
If you've set up a security code, the TouchPanel displays the calculator pad and asks for your security code. See 'Creating a security code' on page 44 for more information.

Basic procedure

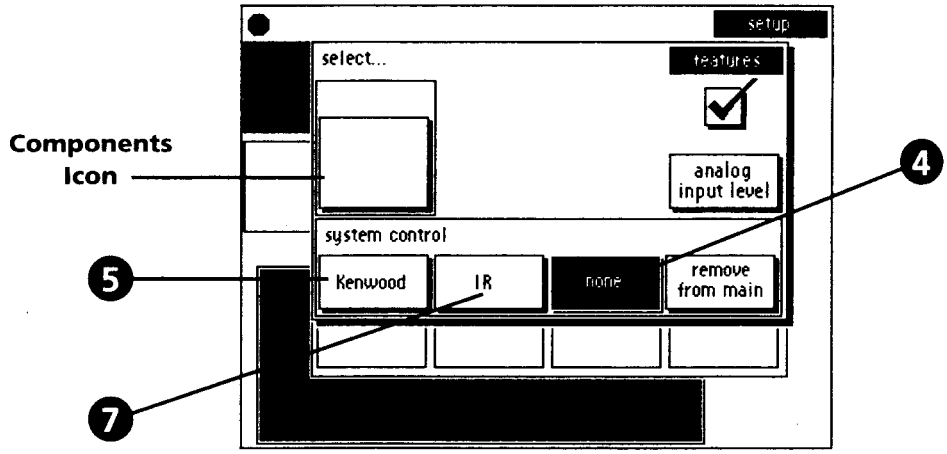
Start with these basic procedures for each component you are setting up.

1. To get to the Select Component screen, touch these buttons:

2. Touch the icon for the component you want to set up.
(For example, to set up a VCR connected to the Video 1 input, touch the VIDEO 1 button.)



The TouchPanel displays the Features screen.



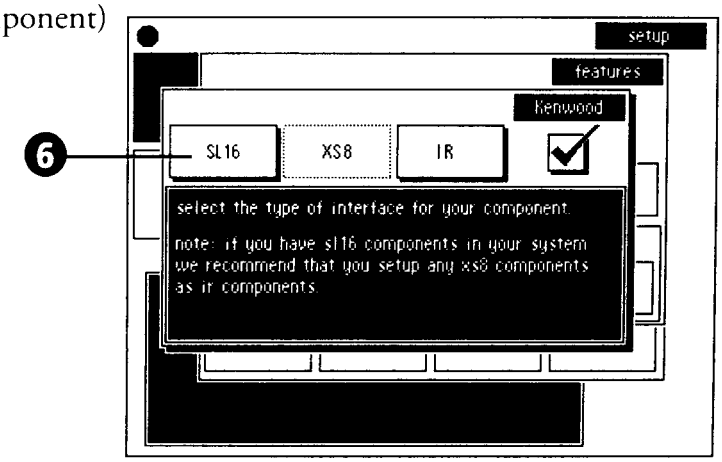
3. Select the system control mode following the instructions in steps 4, 5 and 6. If a button's outline is dotted, you cannot select it for that particular component.

4. If your component cannot be controlled remotely, select NONE. Then, look for the component in the sections below and continue with any additional steps there. (You're done with this section for that component.)

5. If you have a Kenwood SL16 component connected with system control cables, select KENWOOD. The TouchPanel displays the KENWOOD screen.

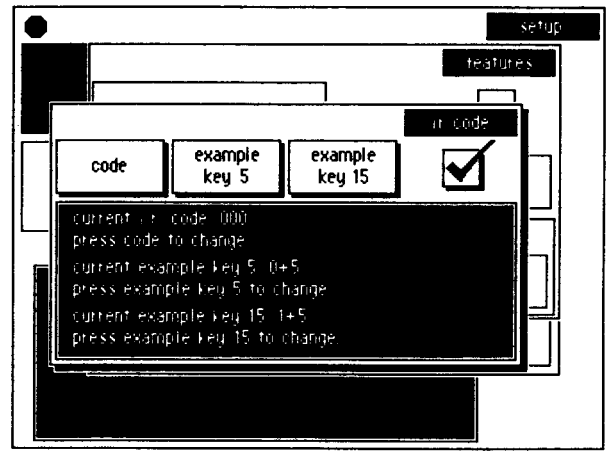
6. Touch the SL16 button, then look for the component in the sections below and perform any additional steps for that component. (You're done with this section for that component.)
   NOTE: If you're setting-up a Kenwood XS8 cassette deck using System Control cables (see the note on page 31), touch the XS8 button, then look for that component in the sections below and perform any additional steps for that component.

7. If your component can be remotely controlled, select IR. Then continue with the 'Setting up IR codes' section below. (You're done with this section for that component)

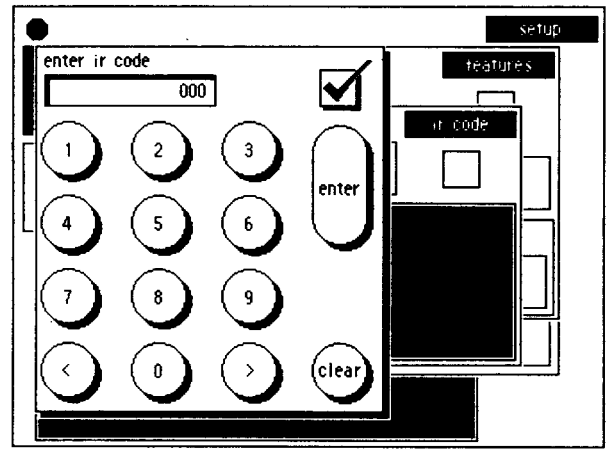


Setting up IR codes

1. After you select IR in the 'Basic set up' section above, the TouchPanel displays the IR Code screen.



2. Touch the CODE button. The TouchPanel displays the calculator pad.

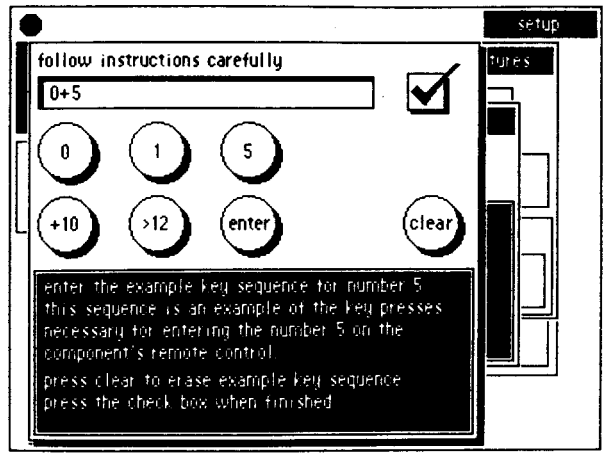


3. Look-up the 3-digit code number for your component on the list starting on page 70 and enter it with the calculator pad. Then touch the ENTER button.

4. Touch the CHECK-MARK to save the IR code.

- If you're setting up a cassette deck, skip to step 14 below.

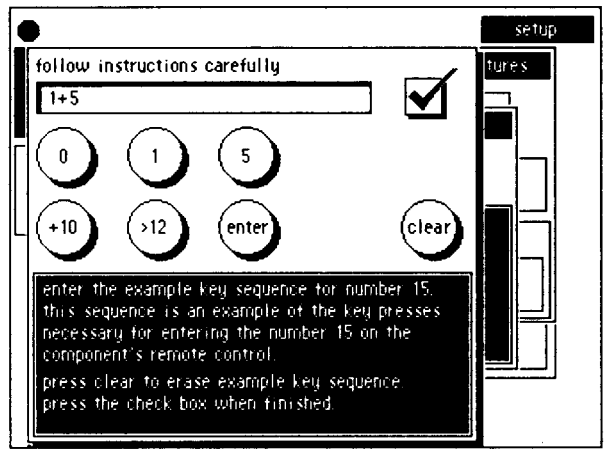
5 Touch the EXAMPLE KEY 5 button. The TouchPanel displays the Example 5 screen.



6 Touch the CLEAR button.

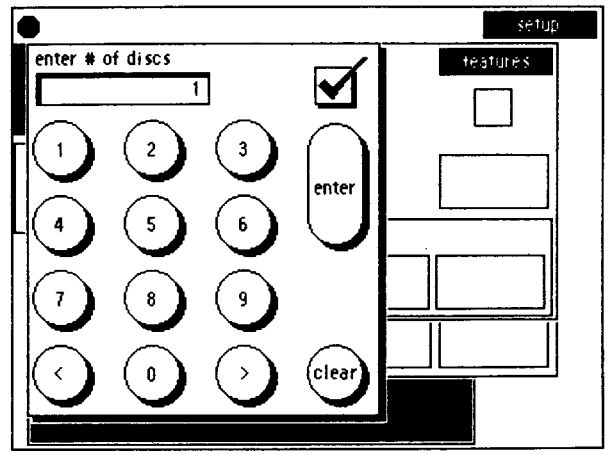
7 Using the buttons on the TouchPanel screen, press the button sequence you would press on your component's remote to enter the number 5. This may be "5" alone, or "0" plus "5" depending on your component. If you make a mistake, touch the clear button and try again. Then touch the CHECK-MARK.

8 Touch the EXAMPLE KEY 15 button. The TouchPanel displays the Example 15 screen.



9 Touch the CLEAR button.

10. Using the buttons on the TouchPanel screen, press the button sequence you would press on your component's remote to enter the number 15. This may be "1" and "5" or "+10" and "5", depending on your component. If you make a mistake, touch the CLEAR button and try again. Then touch the CHECK-MARK.



11. Touch the CHECK-MARK on the IR Code screen to return to the Setup screen.

12. Look for the component in the sections below and perform any additional steps for that component.

Setting up a CD player:

1. Finish the 'Basic setup procedures' section above.

2. Touch the # OF DISCS button. The TouchPanel displays the calculator pad.

3. Enter your CD player's disc capacity, then touch the ENTER button.

4. Touch the CHECK-MARK to save the number of discs, and return to the setup screen. (No change is made if you use the CHECK-MARK before the ENTER button.)

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a Cassette Deck

You can control 2 cassette decks with the Stage 3 Controller. Although the setup for both is almost identical, you'll need to set up each one individually.

1. Finish the 'Basic setup procedures' section above.
   NOTE: If you're setting-up a Kenwood XS8 cassette deck connected using System Control cables (see the note on page 31), touch the XS8 button, then look for that component in the sections below and perform any additional steps for that component.

2. If the deck has a single well, touch the SINGLE button. If it has dual wells, touch the DUAL button.

3. If you want to configure the Tape-2 input as a tape monitor loop (for use with a 3-head deck, for example), touch the ENABLE TAPE-2 MONITOR button.

4. Touch the CHECK-MARK to save the settings and return to the Component setup screen.

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a laser disc player

If you have already completed the Basic Set Up Procedures section above, there are no additional steps. Touch the CHECK-MARK to return to the Component setup screen.

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a mini disc player

If you have already completed the Basic setup procedures section above, there are no additional steps. Touch the CHECK-MARK to return to the Component setup screen.

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a VCR

If you have already completed the Basic setup procedures section above, there are no additional steps. Touch the CHECK-MARK to return to the Component setup screen.

You can control up to 3 VCRs with the Stage 3 Controller. Although the setup for all 3 is identical, be sure you set up each one individually.

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a TV

If you have already completed the Basic Set Up Procedures section above, there are no additional steps. Touch the CHECK-MARK to return to the Component setup screen.

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a satellite receiver or cable TV tuner

If you have already completed the Basic setup procedures section above, there are no additional steps. Touch the CHECK-MARK to return to the Component setup screen.

The Stage 3 Controller will recognize whether the IR code you entered is for a satellite tuner or a cable TV tuner and will automatically configure itself for whichever you are using.

See *Using your Stage 3 Controller* to adjust the analog input level.

Setting-up a turntable

No further setup is required. Touch the CHECK-MARK to return to the Component setup screen.

See *Using your Stage 3 Controller* to adjust the analog input level.

In this step, you will tell the Stage 3 Controller what speakers you are using in your system and what sizes they are. This allows the Controller to send specific frequencies to the correct speakers. You will also adjust the Stage 3 Controller to prevent your speakers from being overdriven.

Speaker setup also lets you balance the levels of all the speakers in your system and adjust for the distance between each speaker and your listening position. Once the speaker levels in your system are all properly balanced and the distances adjusted for, the system will reproduce a much more convincing and realistic surround sound environment.

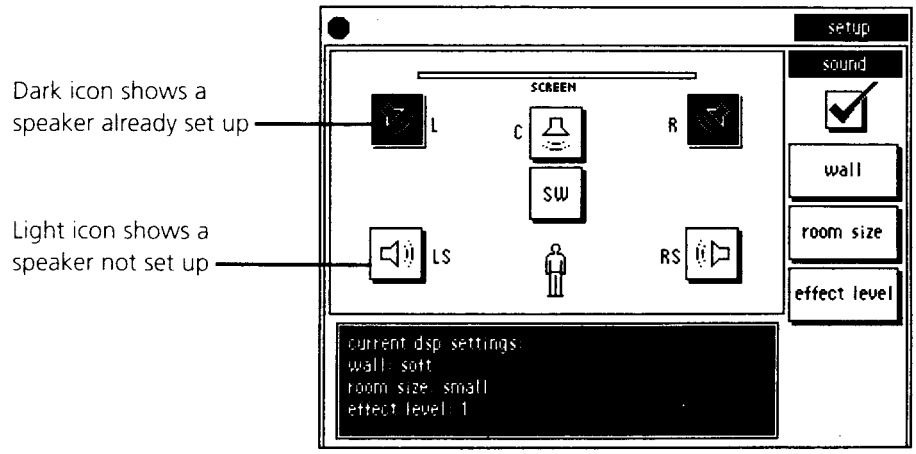
About default settings

The settings you make here will be your system's default settings. You can always change the settings while you're listening to the system (and save those settings as a system preset), but whenever your system is powered-down, the settings will return to those you establish here.

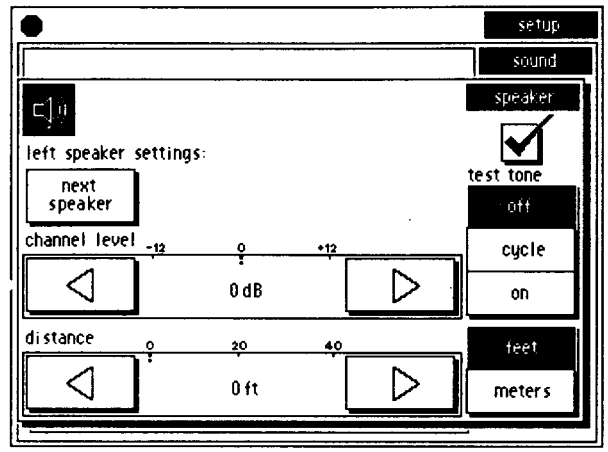
Setting up the front speakers

❶ To get to the sound setup screen, touch these buttons:

The TouchPanel displays the Sound screen.



❷ Touch the L speaker icon. The TouchPanel displays the Speaker screen.



❸ Measure the distance (in a straight line) between the left speaker and your listening position, and enter this distance with the DISTANCE Arrow buttons.
You change the distance by 1 foot each time you touch an Arrow key.

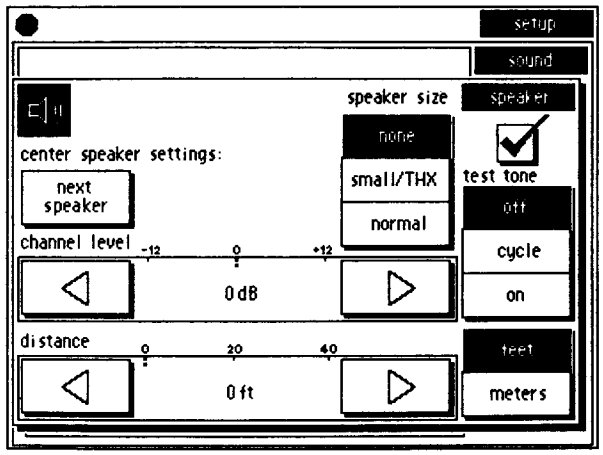
❹ Touch the CHECK-MARK to return to the Sound screen.

❺ Repeat these steps for the right speaker.

Setting up the center and surround speakers

You must set the center and surround speaker settings even if you don't have these speakers in your system.

1. Touch the C speaker icon on the sound screen. The TouchPanel displays the Speaker screen.



2. If you do not have a center speaker, touch the NONE button. If your center speaker is small, and not capable of reproducing deep bass, touch the SMALL button. If your center speaker is large, and capable of reproducing deep bass, touch the NORMAL button.

3. Measure the distance (in a straight line) between the center speaker and your listening position, and enter this distance with the DISTANCE Arrow buttons.
   You change the distance by 1 foot each time you touch an Arrow key.

4. Touch the CHECK-MARK to return to the Sound screen.

5. Repeat these steps for the left and right surround speakers.

Setting up the subwoofer

You must set the subwoofer settings even if you don't have one in your system.

1. Touch the SW speaker icon on the Sound screen.

2. If you do not have a subwoofer, touch the NONE button. Then touch the CHECK-MARK and skip ahead to the 'Balancing the speaker levels' section (Step 12).

3. If you have a subwoofer, touch the NORMAL button.

4. Measure the distance (in a straight line) between the subwoofer speaker and your listening position, and enter this distance with the DISTANCE Arrow buttons. You change the distance by 1 foot each time you touch an Arrow key.

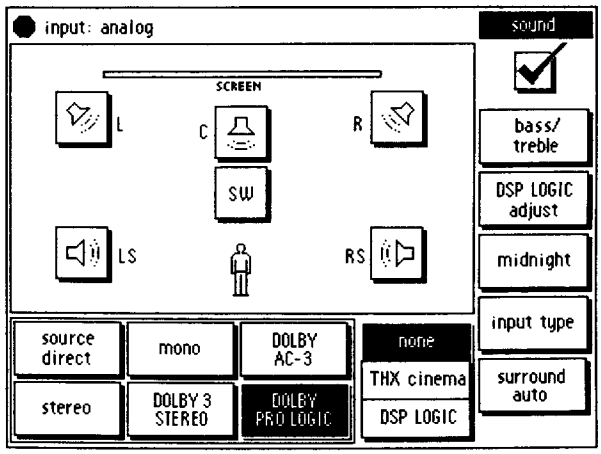
5. Touch the CHECK-MARK to return to the Sound screen.

Setting the bass limiter

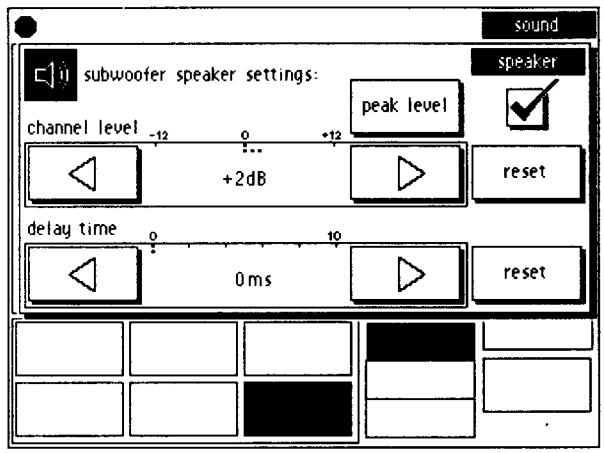
Film soundtracks and other programs recorded in Dolby Digital (AC-3) can contain enough bass energy to damage some speakers. The Stage 3 Controller has a bass limiter circuit that keeps the output to your speaker within safe limits.

1. To get to the Sound screen (not the same as in the previous steps), touch this button:

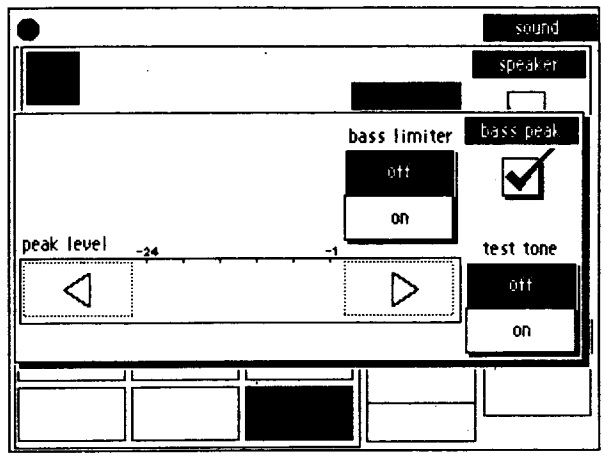
The TouchPanel displays the main Sound screen:



2. If your system has a subwoofer, touch the SW speaker icon. If it does not have a subwoofer, touch either the L or R speaker icon. The TouchPanel displays the Speaker screen.



❸ Touch the PEAK LEVEL button. The TouchPanel displays the Bass Peak screen.



❹ Touch the TEST TONE ON button. You will hear test noise. (The Controller's volume automaically changes to 0 dB when the test noise is on.)

❺ Use the right PEAK LEVEL Arrow button to slowly increase the speaker volume until you begin to hear audible distress from the woofer (distortion, clicking, "bottoming"). Leave the peak level volume at this level.

❻ Touch the BASS LIMITER ON button.

❼ Touch the CHECK-MARK to return to the Speaker screen, then touch the CHECK-MARK on that screen to return to the Sound screen. The bass limiter has been automatically adjusted to prevent your speakers from being overdriven.

Balancing the speaker sound levels

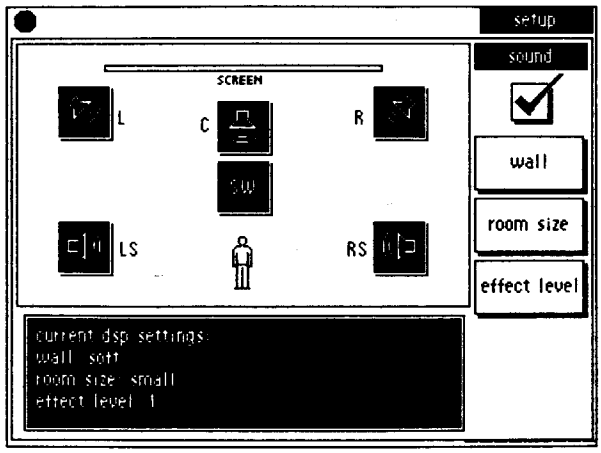
Step 12

You can balance the speakers by ear, or you can use a sound level meter. Using a sound level meter lets you balance your system more accurately, and lets you set the reference playback level. (Once the reference level is set, carefully-transferred films will play at the volume levels intended by their makers when the Stage 3 Controller's volume is set to 0dB. You can, of course, still set the volume level to your own preferences). Once you have balanced the speaker levels, you can also make adjustments while listening to music or watching movies. (See *Using your Stage 3 Controller* for instructions).

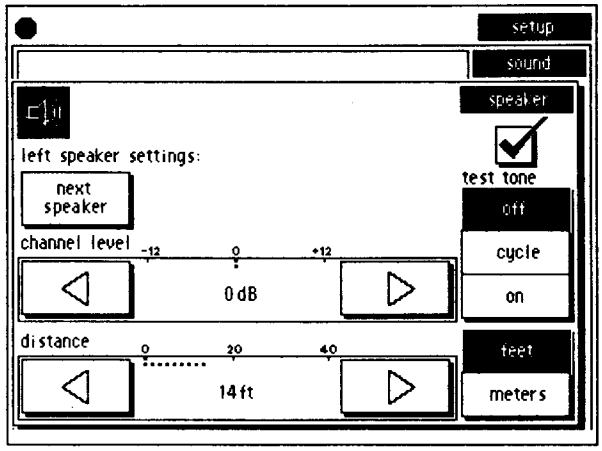
Balancing the speaker levels by ear

❶ To get to the Sound screen, touch these buttons:

The TouchPanel displays the Sound screen.



❷ Touch the L speaker icon. The TouchPanel displays the Speaker screen.



❸ Touch the TEST TONE CYCLE button, and listen as the test noise cycles through each speaker in your system. (The Controller's volume automatically changes to 0dB when the test noise is on. If the noise is uncomfortably loud, use the TouchPanel VOLUME buttons to lower the volume to -6dB). Compare the levels of each channel.

❹ If the left speaker is noticeably louder or quieter than the other channels, use the CHANNEL LEVEL Arrow buttons to match its level to the rest of the test noise cycle.

(If you want to hear the test noise play only through the left speaker, touch the TEST TONE ON button). You can adjust the speaker's level by 1 dB each time you touch a CHANNEL LEVEL Arrow button.

5. Touch the NEXT SPEAKER button to adjust the next speaker. and repeat steps 2–4 for each speaker in your system.

6. After you are done balancing each of the speakers, touch the CHECK-MARK to save the settings.

About balancing the subwoofer level

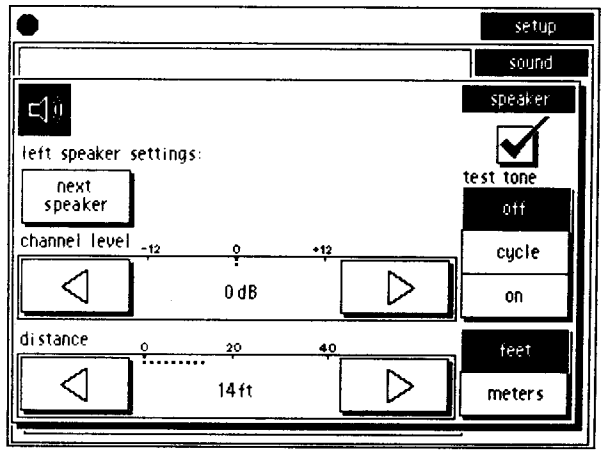
The test noise for the subwoofer is filtered, and doesn't sound as loud to the human ear as it really is. (It's designed to be used with a sound level meter to balance the channel levels). Therefore, to balance the subwoofer by ear, it is best to use familiar music or film soundtracks. This makes it easier to tell if the subwoofer is at the correct volume.

Balancing the speaker levels with a sound level meter

You can use a sound level meter to more accurately balance your system and set the reference playback level. These instructions assume you are using a Radio Shack SPL meter, model 33-2050.

1. To get to the Sound screen, touch these buttons:

2. Touch the L speaker icon. The TouchPanel displays the Speaker screen:



3. Eliminate as many external noise sources as possible.

4. Touch the TEST TONE ON button. (The Controller's master volume will automatically change to 0dB. Do not change the master volume setting until you have completed the speaker balancing procedure.)

5. On the SPL meter, choose 70dB on the large dial, and set the meter controls to 'C' and 'Slow' .

6. Sit at the main listening position. Hold the meter at arm's length, and at ear height. Use the channel level buttons to adjust the selected speaker's level so that the needle on the meter points between 4 and 6 (75 dB). You can adjust the speaker's level by 1 dB each time you touch a CHANNEL LEVEL Arrow button.

7. Touch the NEXT SPEAKER button to adjust the next speaker and repeat these steps for each speaker in your system.

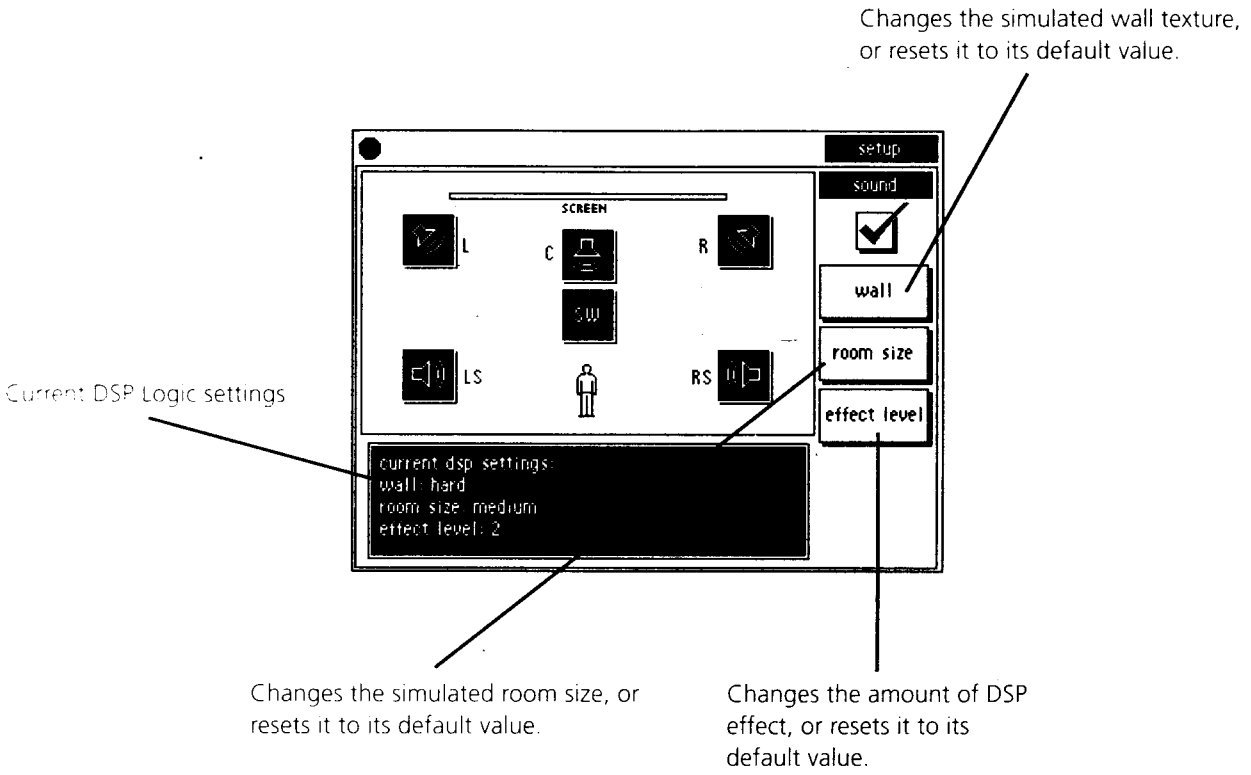
8. After you are done balancing each of the speakers, touch the CHECK-MARK to save the settings.

Setting DSP Logic default values step 13

DSP Logic combines Dolby Digital (AC-3) or Dolby Surround Pro Logic with Kenwood Digital Signal Processing. Using it, you can simulate the sound of different rooms, from an intimate club to a large theater. We recommend setting these default values while you are playing familiar music or movies, with DSP Logic activated, so you can hear how the adjustments affect the sound.
Experiment to create the surround sound that best suits the music and films you play.

1 To get to the Sound screen, touch these buttons:

main menu → setup → sound

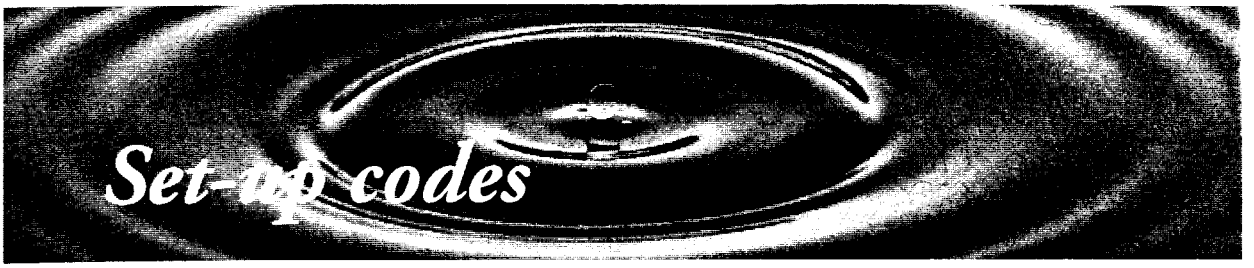


2. Touch the ROOM SIZE button. You can select from 3 different room sizes. The sizes refer to public spaces, so SMALL might be used to simulate a more intimate club, while LARGE could be used to simulate a large theater.

3. Touch the wall button. You can select from 3 different wall textures. SOFT makes the simulated walls absorb more sound (such as in a room full of people), while hard makes them reflect more sound (like a theater that's nearly empty).

4. Touch the EFFECT LEVEL button. You can change the effect level from 1 (very little effect) to 5 (maximum effect).

5. When you are done, touch the CHECK-MARK to return to the Setup screen.



Use these codes with the instructions for setting up components, starting on page 49.

VCR

Maker	Set-up code
Action	332
Adventura	015
Aiko	293
Aiwa	015
Akai	056, 064, 068, 076, 121, 171, 257
American High	050
Asha	255
Audiovox	052
Beaumark	255
Bell & Howell	119
Broksonic	136, 199, 226
Calix	052
Canon	050, 182
Capehart	035
Carver	096
CCE	087, 293
Citizen	052, 293
Colt	087
Craig	062, 255, 286
Curtis Mathes	050
Cybernex	066, 255
Daewoo	035, 060, 061, 102, 293
Daytron	035
Dynatech	015
Electrohome	052
Electrophonic	052
Emerex	047
Emerson	015, 017, 051, 052, 058, 076, 083, 103, 136, 199, 223, 224, 226, 227, 293, 309, 310, 376
Fisher	062, 069, 081, 119
Fuji	048, 050
Funai	015, 340
Garrard	015, 340
GE	050, 075, 080, 217
Go Video	247, 294
Goldstar	033, 052, 053
Goodmans	077, 087
Gradiente	015
Harley Davidson	015
Harmon-Kardon	053, 090
Harwood	083, 087
Headquarter	061
Hi-Q	062
Hitachi	015, 056, 057, 080, 120, 181
Jensen	056
JVC	023, 056, 082, 399
Kenwood	053, 056, 082, 399
KLH	087
Kodak	050, 052
Lloyd	015
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Logik	087
Luxor	121
LXI	052
Magnavox	050, 054, 096, 118, 125, 164
Magnin	255
Marantz	050, 096, 161
Marta	052
Matshushita	050
MEI	050
Memorex	015, 050, 052, 054, 061, 062, 063, 119, 255, 283, 314
MGA	058, 076
MGN Technology	255
Minolta	057, 120

Mitsubishi	058, 076, 082, 090, 188, 229, 257
Motorola	050, 063
MTC	015, 255
Multitech	015, 087
NAD	073
NEC	053, 055, 056, 065, 082, 097
Nikko	052
Noblex	255
Olympus	050, 241
Optimus	052, 063, 073, 119, 447
Optonica	077
Panasonic	050, 092, 177, 240, 241, 469
Penney	050, 052, 053, 055, 057, 069, 255
Pentax	057, 080, 120
Philco	050
Philips	050, 077, 096, 125
Pilot	052
Pioneer	073, 082
Portland	035
Protec	087
Pulsar	054, 066
Quarter	061
Quartz	061
Quasar	050, 092
Radio Shack	015, 052, 340
Radix	052
Randex	052
RCA	057, 075, 080, 092, 120, 121, 164, 217
Realistic	015, 050, 052, 061, 062, 063, 077, 081, 119, 255
Ricoh	049, 268
Runco	054
Saisho	160
Samsung	060, 066, 068, 255
Sanky	054, 263
Sansui	056, 082, 097, 286
Sanyo	061, 062, 119, 255, 283
Scott	058, 060, 136, 199, 225, 226, 227
Sears	050, 052, 057, 061, 062, 069, 072, 081, 119, 120
Sharp	063, 077
Shintom	087
Shogun	066, 255
Singer	087
Sony	026, 047, 048, 049, 050, 268
STS	057
Sunpak	268
Sylvania	015, 050, 058, 096, 118, 125
Symphonic	015, 340
Tatung	056
TEAC	015, 056
Technics	050, 177
Teknika	015, 050, 052, 067
Telefunken	202
TMK	051, 223, 255
Toshiba	058, 060, 072, 081, 225, 227
Totevision	052, 255
Unitech	255
Vector	060
Vector Research	053, 055
Video Concepts	055, 060, 076
Videosonic	255
Wards	015, 050, 057, 062, 063, 077, 087,164, 227, 255
XR-1000	015, 050, 087
Yamaha	053
Zenith	048, 049, 054

Laser disc player

Maker	Set-up code
Aiwa	218
Carver	079, 209, 338
Denon	187
Disco Vision	038
Funai	218
Kenwood	251, 273
Magnavox	209, 232, 256
Marantz	079, 209
Mitsubishi	074

NAD	074
NEC	301
Panasonic	219, 245
Philips	079. 209
Pioneer	038, 074
Quasar	219
RCA	143, 366
Realistic	218
Samsung	338
Sega	038
Sharp	016
Sony	208, 216, 285
Theta Digital	209
Yamaha	232

TV

Maker	Set-up code
A-Mark	018
Abex	047
Admiral	108
Adventura	061
Aiko	107
Akai	045, 113
Akura	233
Alaron	231
Alba	233
Alleron	194, 198
Ambassador	192
Anam	019, 024, 083, 195
Anam National	070
AOC	018, 034, 045, 067, 152, 200
Archer	018
Asuka	233
Audiovox	018, 195
Basic Line	233
Belcor	034
Bell & Howell	031, 169
Blue Sky	233
Bradford	195
Brockwood	034
Broksonic	018
BTC	233
Bush	233
Candle	045, 061, 071, 201
Carver	069
CCE	232
Celebrity	015
Citizen	045, 054, 061, 071, 075, 107, 201, 295
Clairtone	200
Concerto	071
Contec	172, 173, 195, 200
Craig	195
Crown	054, 195
Curtis Mathes	045, 054, 075, 169, 430
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Dainichi	233
Daytron	034
Decca	087
Dumont	032, 034
Dynatech	064
Electrobrand	015, 200
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Emerson	034, 053, 054, 169, 173, 192, 193, 194, 195, 196, 197, 198, 200, 251, 285, 295, 297, 478
Envision	045
Fidelity	097
Finlux	087
Fisher	169, 174
Fujitsu	087, 194
Funai	194, 195
Futuretech	195
GE	036, 042, 044, 062, 066, 070, 150, 189, 193, 297
GEC	087
Gibralter	032, 034, 045
Genexxa	233
Goldstar	016, 017, 034, 045, 047, 054, 071, 121, 193, 424
Goodmans	087
GPM	233
Granada	087
Grunpy	194, 195
Hallmark	193
Harman Kardon	093

Harvard	083, 195
Hinari	233
Hitachi	047, 053, 071, 110, 112, 160, 166, 188, 242, 424
Ima	195
Infinity	069
Inno Hit	087
Isukai	233
Janeil	061
JBL	069
JCB	015
Jensen	065
JVC	051, 068, 197
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Kaypani	067
Kenwood	034, 045
Kloss	039, 061, 093
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Leyco	087
Logik	031
Luxman	071
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Magnavox	045, 051, 069, 111, 201, 245
Majestic	030, 031
Marantz	045, 069
Matsui	087, 232
Megatron	018, 160, 193
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Memorex	031, 071, 121, 165, 169, 193
MGA	034, 045, 165, 170, 193
Midland	032, 047, 054, 062, 066, 150
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Mitsubishi	034, 113, 165, 170, 193, 256
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MTC	034, 045, 064, 071, 075, 106, 200
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Nikko	045, 107, 193
NTC	107
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Optimus	169, 181
Optonica	108, 180
Orion	251
Osaki	087, 233
Oso	233
Osaume	087
Panasonic	066, 069, 070, 177, 265, 353
Penney	017, 018, 033, 034, 036, 042, 045, 047, 054, 062, 066, 075, 125, 164, 171, 193
Philco	034, 045, 069, 111
Philips	052, 069
Pilot	034, 045, 054
Pioneer	053, 181, 187
Portland	034, 054, 107
Price Club	075
Prism	066
Proscan	062
Proton	018, 046, 067, 193
Pulsar	032
Quasar	066, 070, 234, 265
Radio Shack	034, 047, 054, 180, 195, 424
RCA	033, 034, 044, 053, 062, 105, 150, 189, 293
Realistic	034, 045, 047, 054, 071, 169, 180, 193, 195
Rhapsody	198, 200, 231
Roadstar	233
Runco	032, 045
Sampo	045, 047, 054, 067, 115, 125
Samsung	034, 045, 047, 054, 071, 075, 125, 193
Samsux	054
Sanyo	087, 161, 169, 174
Schneider	233
Scimitsu	034
Scotch	193
Scott	034, 193, 194, 195, 251
Sears	030, 062, 069, 071, 161, 163, 164, 169, 171, 174, 183, 186, 193, 194

Sharp	054, 108, 168, 172, 180
Shogun	034
Signature	031
Simpson	201, 202
Sony	015, 026, 095, 126, 288
Soundesign	193, 194, 195, 201
Spectricon	018, 152
Squareview	186
SSS	034, 195
Standard	233
Starlite	195
Supre-Macy	061
Supreme	015
Susumu	233
Sylvania	045, 069, 080, 111, 396
Symphonic	186
Tandy	087, 108, 233
Tatung	018, 064, 070, 087
Technics	066, 265
Techwood	066, 071
Teknika	031, 034, 054, 069, 071, 075, 107, 165, 194, 195, 201, 337
Tensai	233
Tera	046
Thorn	087
TMK	071, 192, 193
Toshiba	051, 075, 164, 169, 171
Tosonic	200
Totevision	054
Trical	172
Ultra	406
Universal	042
Vector Research	045
Victor	068
Video Concepts	113
Vidikron	069, 257
Vidtech	034, 193
Viking	061
Wards	031, 034, 035, 036, 042, 043, 044, 045, 069, 071, 095, 111, 126, 180, 189, 193, 194
Yamaha	034, 045
Zenith	031, 032
Zonda	018

Cable box

Maker	Set-up code
ABC	016, 018, 022, 023, 026, 028, 032, 062
Antronix	037, 222
Archer	037, 054, 168, 222
Belcor	071
Cable Star	071
Cabletenna	037
Cableview	037
Century	168
Citizen	168
Colour Voice	040, 046
Comband	247, 248
Comtronics	055, 075
Contec	034
Dae Ryung	023
Eastern	017
Electricord	093
Focus	415
Garrard	168
GC Electronics	071, 222
GE	247, 248
Gemini	030, 072, 085, 257
General Instrument	026, 291, 491
Goldstar	055, 159
Hamlin	024, 035, 049, 274, 288
Hitachi	026
Hytex	022
Jasco	168
Jerrold	018, 026, 027, 029, 030, 039, 062, 113, 291, 491
Linsay	455
Macom	048
Magnavox	042
Memorex	015
Movie Time	078, 093, 171, 218
Northcoast	329
NSC	078, 085, 171, 218
Oak	022, 034, 263
Panasonic	015, 036, 122
Panther	652
Paragon	015
Philips	040, 042, 043, 044, 045, 046, 168, 257, 305

Pioneer	038, 159, 275, 548
Popular Mechanics	415
Pulsar	015
RCA	036
Realistic	222
Regal	035, 274, 288, 294
Regency	017
Rembrandt	026, 085
RK	321
Runco	015
Samsung	055, 159
Scientific Atlanta	021, 023, 032, 292, 492
Seam	525
Signal	030, 055
Signature	026
SL Marx	055
Sprucer	036, 322
Standard Components	111, 170
Starcom	018, 030, 062, 113
Stargate	030, 055
Starquest	030
Sylvania	016
Tandy	273
Tatung	112
Teknika	161
Telecaption	236
Teleview	055
Texscan	016, 111
Timeless	433
Tocom	027, 028, 074
Toshiba	015
Tusa	030
TV86	078
Uniden	240
Unika	037, 168, 222
United Artists	022
United Cable	018
Universal	037, 054, 071, 092, 093, 168, 206, 222, 337
Videoway	265
Vidtech	259
Viewstar	042, 075, 078, 126, 226, 273, 304
Zenith	015, 069, 540
Zentek	415

Satellite receiver

Maker	Set-up code
Amplica	087
Amway	058, 090
Birdview	060, 094
BSR	110
Cable Innovations	569
Capetronic	110
Century	553
Channel Master	033, 227
Chaparral	068, 224
Citoh	179
Conifer	019
Connexions	411
Curtis Mathes	076, 087
DNT	411
Drake	033, 077, 079, 081, 164, 165, 260
DX Antenna	056
Echostar	115, 163, 174, 185, 233, 284, 295, 327, 411, 469
Equus	196
Fuba	411
Fujitsu	201, 251
General Instrument	053, 065, 376, 569
Gould	070
Homecable	253
Hytek	110
Intersat	058
IQ	225
IQ Prism	225
Janeil	167
Jerrold	051, 376, 642
Kenwood	279, 371
Macom	033, 065, 076
Memorex	284
NEC	117
Norsat	019
Panasonic	167
Philips	215
Pico	090
Primestar	376, 642
Prosat	173
Radio Shack	569

Radix	411
Ramsey	090
RCA	581
Realistic	066, 067
Salora	197
Scientific Atlanta	249, 370
Seemann	411
Sony	654
Star Trak	195, 436, 562
Starcast	057
Strong	436
STS	056, 205, 225
SuperGuide	326
Toshiba	076, 097
Uniden	067, 089, 091, 253, 311, 385, 569
Wisi	411
Zenith	076, 079

CD player

Maker	Set-up code
ADC	033
Adcom	170, 249
ADS	258
Aiwa	027, 139, 172
Akai	171
Audio Alchemy	209
Audio Technica	185
BSR	209, 260
California Audio Labs	044
Capetronic	252
Carrera	209, 409
Carver	172, 194
Craig	630
DAK	260
Denon	018, 049
DKK	015
Emerson	170, 179, 320, 484
Fisher	063, 103, 189, 194, 357
Garrard	295, 408
GE	024, 349
Genexxa	047, 179, 320
Goldstar	398, 409, 432
Harman Kardon	123, 188, 441
Hitachi	047, 170
Inkel	080
JVC	087, 670, 671, 673
Kenwood	043, 052, 063, 205, 352, 353, 354, 355, 538
Kodak	302
Krell	172
Kyocera	033
Luxman	108, 164, 281, 498
LXI	320
McIntosh	302
Magnavox	144, 172
Marantz	020, 044, 172, 195
MCS	044, 058
MGA	098
Mission	172
Mitsubishi	098, 113
NAD	034
Nakamichi	162
NEC	058, 249
Nikko	179, 185, 189
NSM	172
Onkyo	116, 117
Optimus	015, 047, 052, 102, 111, 190, 194, 209, 211, 320, 357, 441, 483
Panasonic	044, 382, 767
Parasound	209
Philips	172, 289, 302
Pioneer	047, 111, 259, 483
Proton	167, 172
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Quasar	044
RCA	068, 170, 194, 320
Realistic	170, 179, 190, 194, 195, 252
Rotel	172
SAE	172
Sansui	172, 217, 320
Sanyo	102, 194, 364
Scott	170, 179, 320
Sears	320
Sharp	052, 195
Sherwood	080, 129, 195, 211, 441
Shure	058
Signature	123

Sony	015, 200, 412, 505, 619, 620, 688, 742
Soundesign	160
STS	033
Symphonic	198
Teac	031, 060, 168, 189, 195, 198, 408
Technics	044, 318
Toshiba	034
Vector Research	209, 409, 432
Victor	087
Wards	123
Yamaha	051, 185, 202
Yorx	476
Zenith	630

Cassette deck

Maker	Set-up code
ADC	186
Aiwa	044, 212, 215
Akai	203, 204, 298
Carver	044
Denon	091
Fisher	089
Garrard	323, 324, 454
Harman Kardon	197
JVC	259, 288, 289
Kenwood	085, 086, 107, 198, 220, 248, 249, 266, 401
Kyocera	186
Luxman	106, 110
Magnavox	044
Marantz	024, 044
Memorex	116
Mitsubishi	298
NAD	159
Nakamichi	162
NEC	180
Onkyo	115, 151, 297
Optimus	042, 235, 352, 454
Panasonic	265
Philips	044
Pioneer	042, 114, 116, 235
Proton	043
RCA	041
Revox	205
Sansui	024, 044
Sherwood	352
Sony	185, 258, 306
Teac	304, 323, 324
Technics	244
Victor	288, 289
Wards	042
Yamaha	109, 112, 220

Mini Disc player

Maker	Set-up code
Kenwood	841
Sony	505

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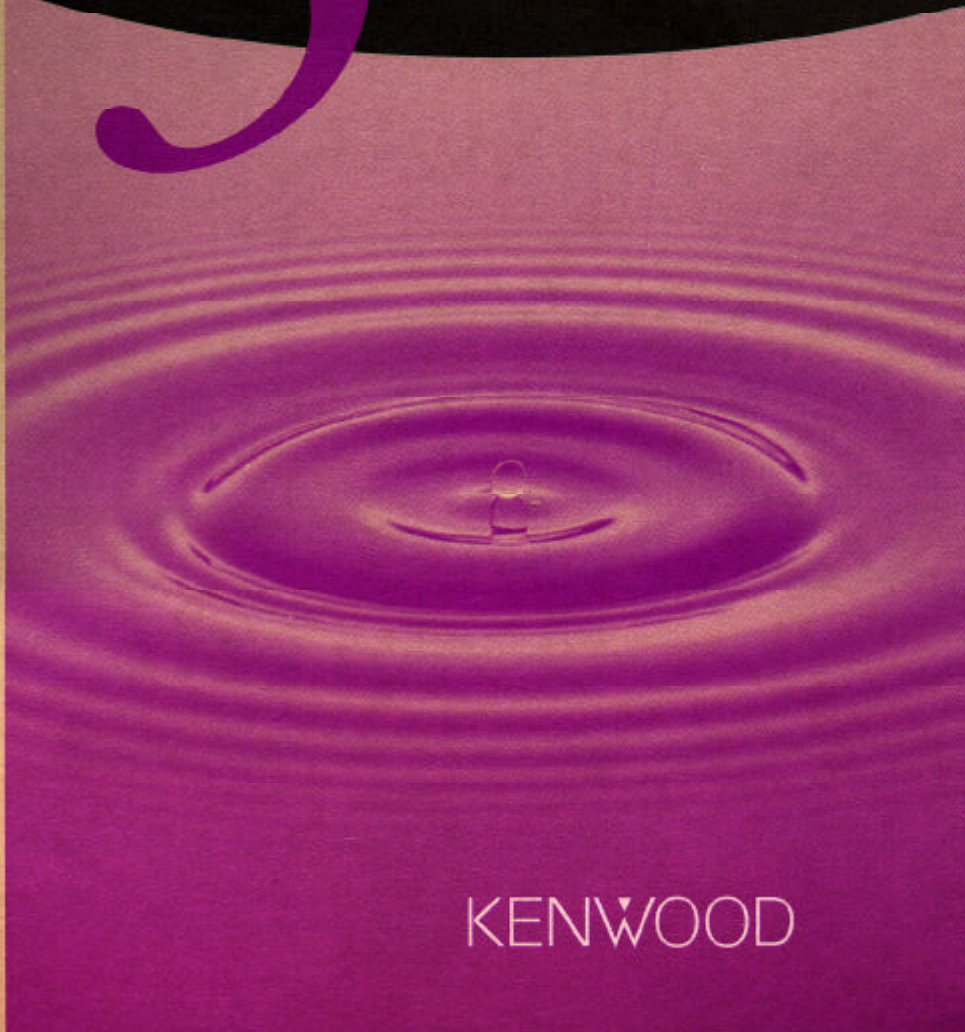
3 stage

Using your KC-Z1 Controller



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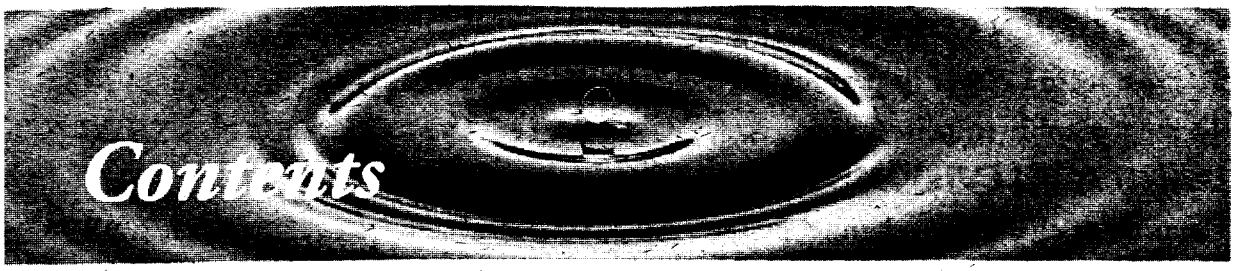

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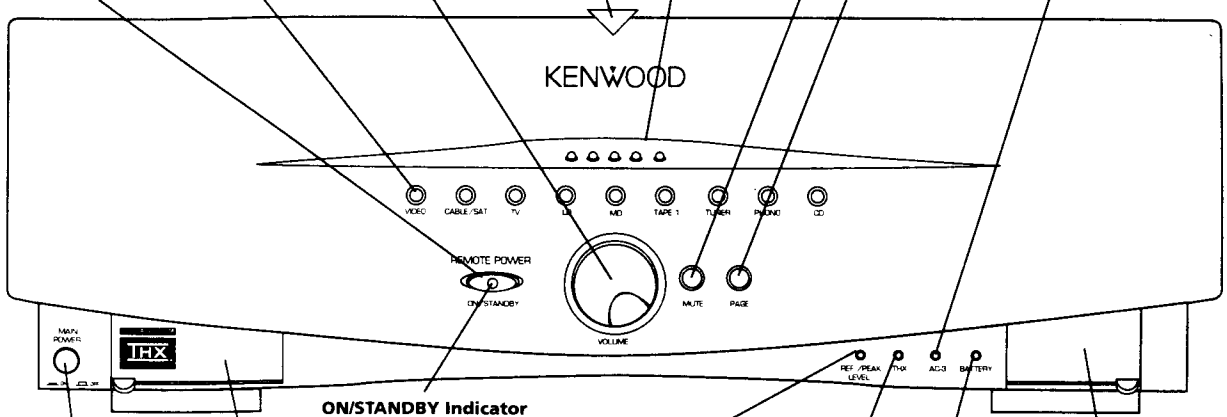
How the Stage 3 Controller works

Your new Stage 3 Controller is designed to let you operate all of your entertainment components—your TV, VCR, laserdisc or DVD player, CD player, even automatic curtain-closers and light dimmers if you have them—with one simple instrument: the TouchPanel. Remember that before you can use the TouchPanel to operate these components, they must be connected to the Controller and set up (see *Setting up your Stage 3 Controller* for details).

You also use the TouchPanel to operate the functions of the Stage 3 Controller itself:

- FM/AM radio
- Home theater surround sound options, which includes playing movies in Dolby Surround Pro Logic or Dolby Digital (AC-3)
- Sound processing options, which includes speaker balance and delay, treble and bass adjustments, THX Cinema, and DSP Logic
- System presets and alarms, which allow you to program the Controller to carry out

The front panel controls



TouchPanel Lock
Locks the TouchPanel into its Dock

MUTE Switch
Touch to mute the sound; touch again to restore the sound

TouchPanel Dock
Attach the TouchPanel here when it is not being used

PAGE Switch
Touch and the TouchPanel emits a tone to help you locate it

INPUT Selectors
Touch to select an input source. The active input glows BLUE

VOLUME Control
Turn clockwise to increase the volume; turn counter-clockwise to decrease the volume

DOLBY DIGITAL (AC-3) Indicator
Glows GREEN when a Dolby Digital (AC-3) input signal is detected

REMOTE POWER Switch
Touch to turn the unit ON

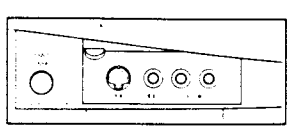
ON/STANDBY Indicator
Glows RED when the unit is in STANDBY mode; glows GREEN when the unit is operational

MAIN POWER Switch
Push to apply power to the unit (places the unit in the STANDBY mode)

INPUT OVERLOAD/REFERENCE LEVEL Indicator
Flashes GREEN when a source's output level attains THX or Dolby reference level; flashes RED frequently or remains RED for 1 second or longer when the source's output level is overloading the Stage 3 Controller's input circuitry

BATTERY CHARGE Indicator
Glows RED while a battery is charging; glows GREEN when the battery is fully charged

BATTERY CHARGE Compartment



VIDEO 3 Inputs
Connect a video playback source (such as a camcorder)

THX Indicator
Glows GREEN while in THX Cinema mode

About the TouchPanel

How the TouchPanel sends information

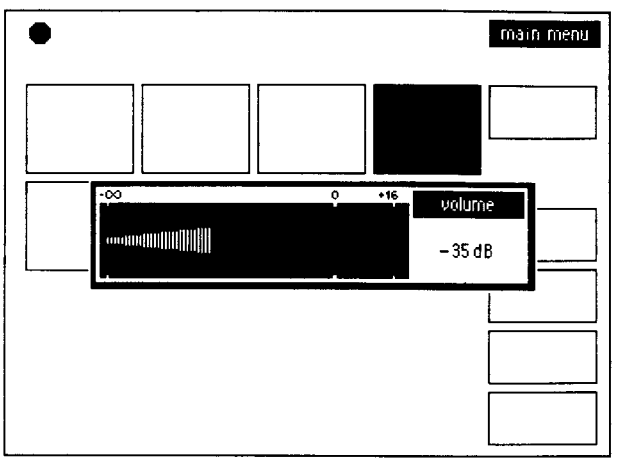
The TouchPanel communicates with the Controller using radio waves, so you can operate the controller from anywhere within approximately 100 feet of it.

Touching a button

When you touch a button, the TouchPanel responds with a chirp sound so you get audible feedback.

Using the volume control

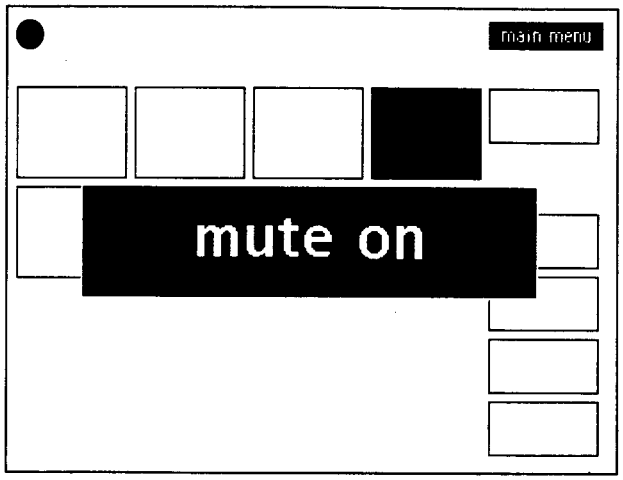
When you use the TouchPanel to change the volume, it displays a volume indicator.



- Each time you push the VOLUME buttons, the volume changes in 1 dB increments. If you hold the button down, the volume changes continually.
- The volume indicator disappears about 2 seconds after you finish adjusting the volume.
- If you change the volume using the knob on the Controller, the volume indicator does not display. However, the next time you change the volume using the TouchPanel, the new volume level will be displayed.
- When you turn the Controller on after it has been powered-down, the volume automatically resets to a low level, no matter what the volume setting was when the Controller was powered-down. This prevents accidental damage to the system and avoids a sudden burst of loud music.

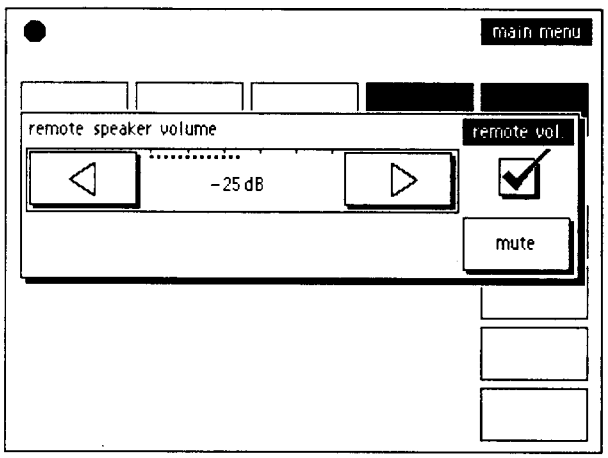
Using the mute control

You can instantly set the volume to zero (mute) by pressing the MUTE button. Pressing it again restores the volume. When the Mute function is activated, the TouchPanel displays this screen:



Using a second set of speakers

If you've set up your system to do so, you can use the TouchPanel to control a second set of speakers independently of the main speakers in your system. Touch the REMOTE SPEAKER VOLUME button on the Main Menu. The TouchPanel displays the remote volume indicator.

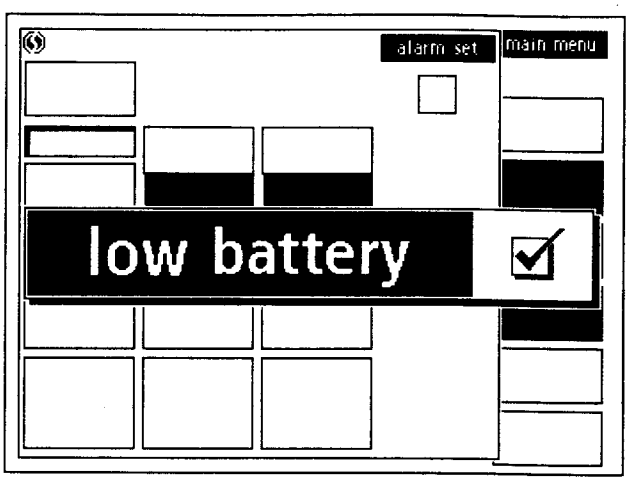


- Each time you push the volume arrow buttons, the volume changes in 1 dB increments. If you hold the button down, the volume changes continually.
- The volume indicator disappears about 2 seconds after you finish adjusting the volume.
- When you turn the Controller on after it has been powered down, the volume automatically resets to a low level, no matter what the volume setting was when the Controller was powered down. This prevents accidental damage to the system and avoids a sudden burst of loud music.

About battery life

Under constant use (with the LCD display constantly lit), a fully-charged battery will last 4 to 5 hours before it needs to be recharged. Under normal use (the LCD display set to shut off a few seconds after it's used), the battery should last much longer. See "Setting the LCD Sleep Time" for instructions on adjusting the TouchPanel to help maximize battery life.

The TouchPanel screen will display the following message when its battery needs recharging:



- Exchange the battery with the fully-charged extra battery in the controller's Battery Compartment.
- The batteries can be recharged and reused approximately 250 times. You will know a battery is nearing the end of its life when its use time shortens.
- Only use DURACELL DR-17 batteries.

About the rechargable batteries

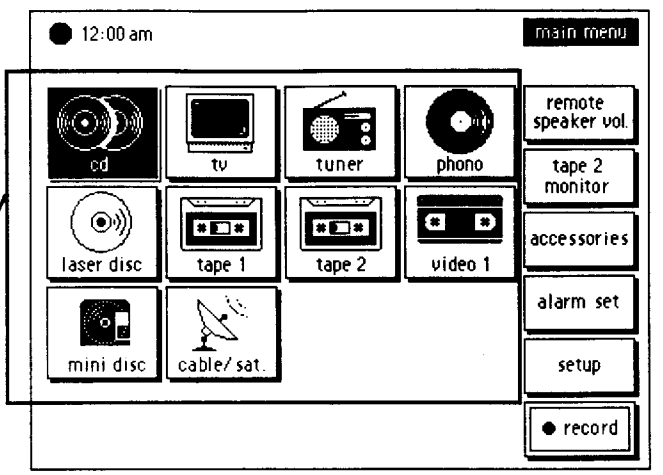
- When batteries need recharging, recharge them as soon as possible. Also, do not expose the batteries to high temperatures. This will help the batteries maintain their charge.
- For more information about batteries, contact Duracell directly at 800-551-2355.

Using the TouchPanel

When you've finished connecting your components and setting them up, the TouchPanel's Main Menu will look something like the screen below.

At any time, to get to the MAIN MENU screen, touch this button:

The main menu



SELECTION BUTTONS
Allow you to activate or adjust different functions

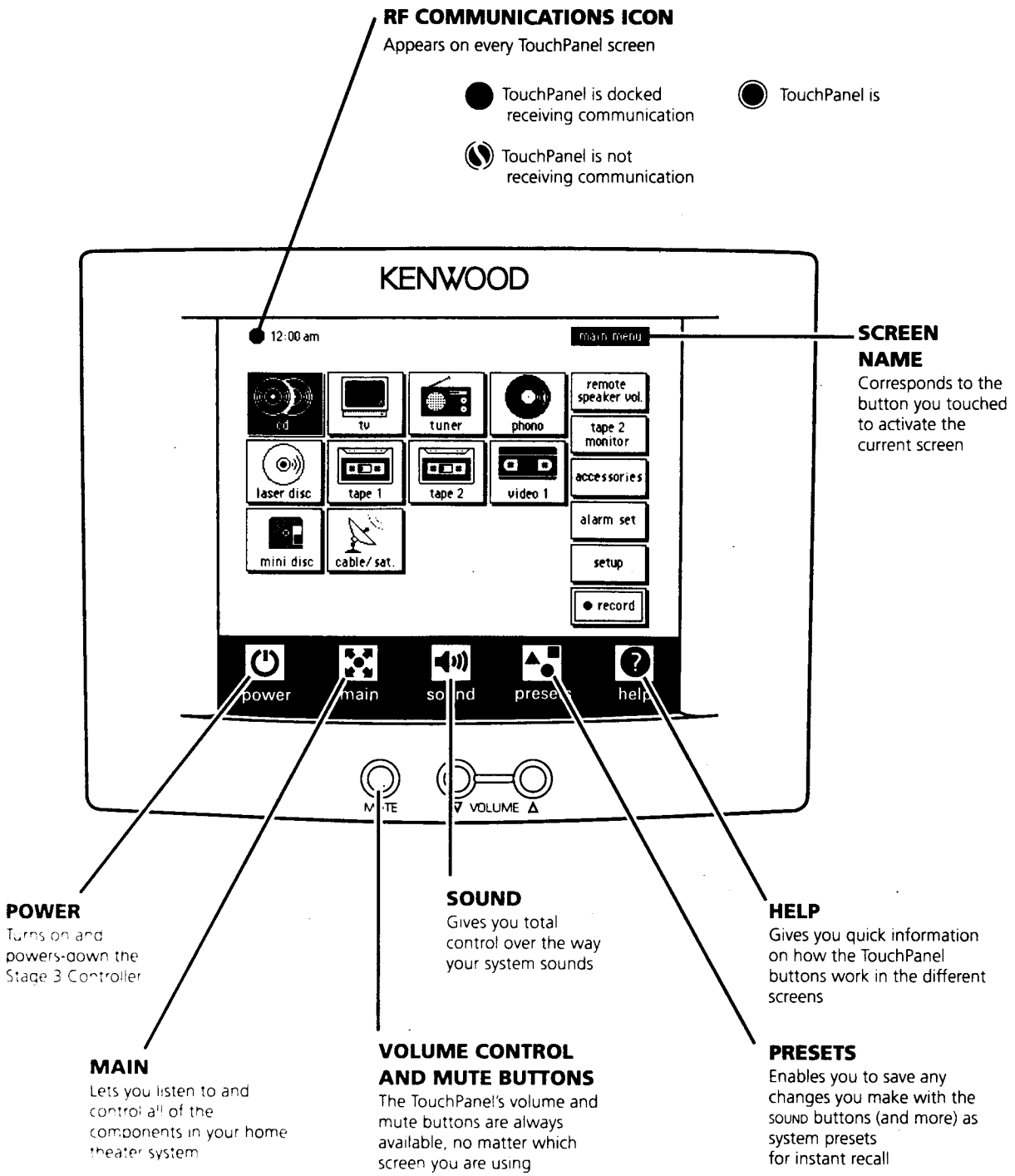
COMPONENT BUTTONS
These buttons show you the components you have connected to the Controller, and will look different than this example depending on the components you've installed. Each of these component buttons takes you to a screen you can use to operate the component shown.

About SL16 components

If a function is not available with your Kenwood SL16 component, an icon still displays on the TouchPanel the first time you use it. It will disappear after the TouchPanel communicates with the component.

Other TouchPanel buttons and indicators

No matter which TouchPanel screen you are on, general controls and indicators are available.



About the auto-off feature

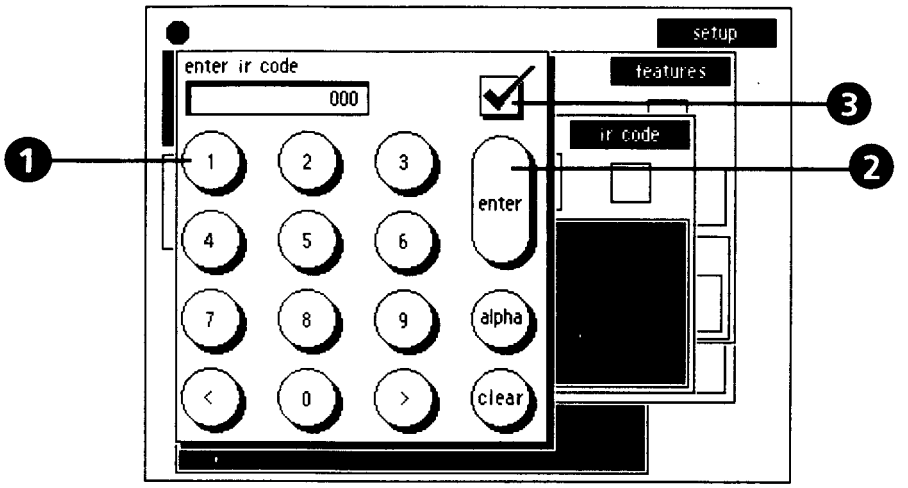
The TouchPanel turns itself off after a period of time if it hasn't been used. This feature saves battery power, and can be adjusted (see *Setting up your KC-Z1 Controller*). To reactivate the TouchPanel, simply touch it again.

Using the calculator pad

Anytime you need to enter a number or create a label, the TouchPanel displays the calculator pad. Here's how to use it.

Entering numbers

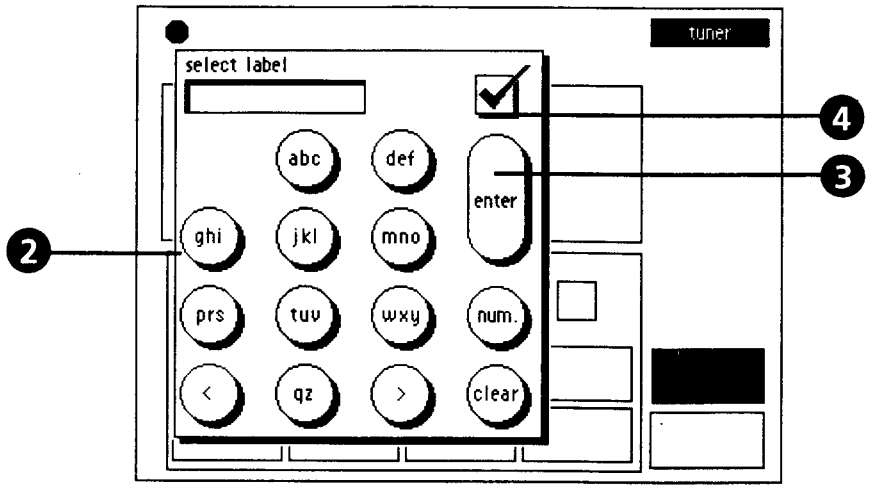
1. Enter the number using the NUMBER buttons.
2. Touch the ENTER button to accept the number.
3. Touch the CHECK-MARK to save what you entered. No change is made if you use the CHECK-MARK before the ENTER button.



NOTE: The calculator pad in the DVD control screens has additional functions. See *Using a DVD Player* (page 35) for details.

Creating a label

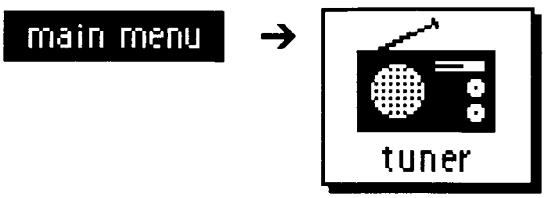
1. Touch the ALPHA button on the Calculator Pad.
2. Touch the LETTER buttons to enter letters. Touch once for the first letter, twice for the second letter, three times for the third letter. Touch the ARROW FORWARD button to enter the next letter.
3. Touch the ENTER button to accept the label.
4. Touch the CHECK-MARK to save the label. No change is made if you use the CHECK-MARK before the ENTER button.



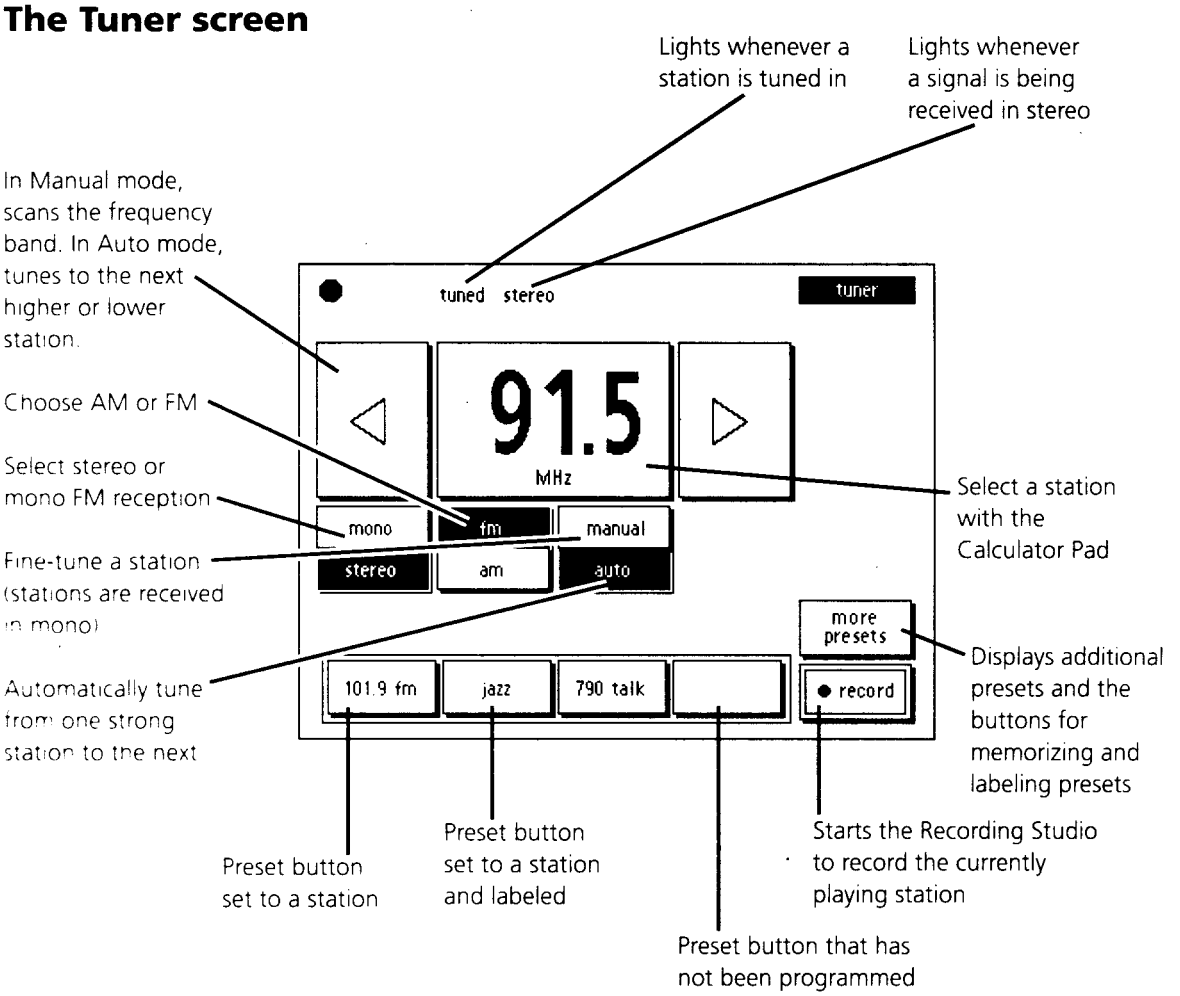
Using the tuner

You can use the Tuner screen to tune and play radio stations, set station presets, and begin recording from a radio station.

To get to the Tuner screen, touch these buttons:

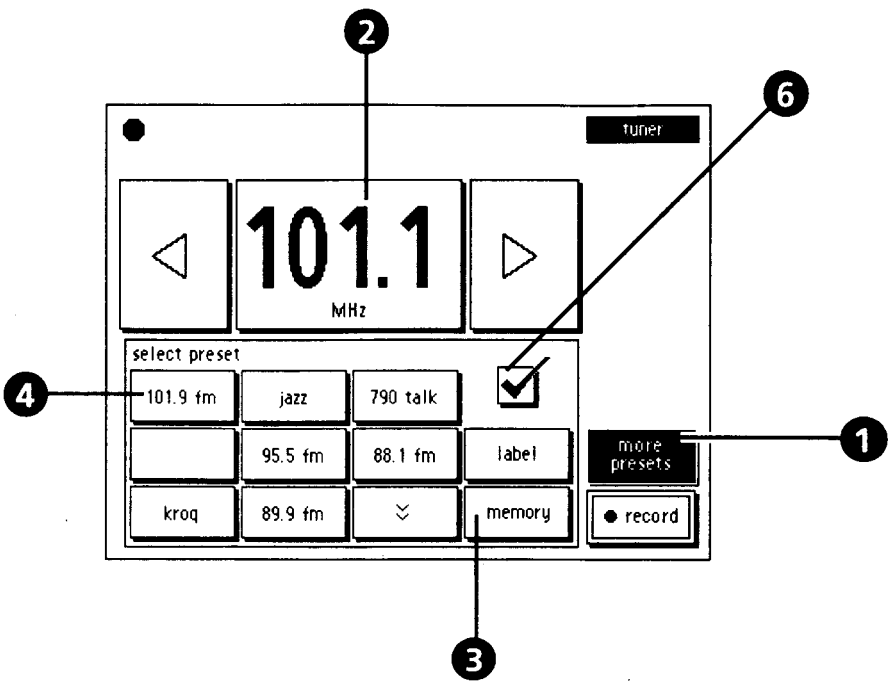


The Tuner screen


Lights whenever a station is tuned in
Lights whenever a signal is being received in stereo
In Manual mode, scans the frequency band. In Auto mode, tunes to the next higher or lower station.
Choose AM or FM
Select stereo or mono FM reception
Fine-tune a station (stations are received in mono)
Automatically tune from one strong station to the next
tuned
stereo
tuner
91.5
MHz
mono
fm
manual
stereo
am
auto
Select a station with the Calculator Pad
more presets
Displays additional presets and the buttons for memorizing and labeling presets
101.9 fm
jazz
790 talk
record
Preset button set to a station
Preset button set to a station and labeled
Preset button that has not been programmed
Starts the Recording Studio to record the currently playing station

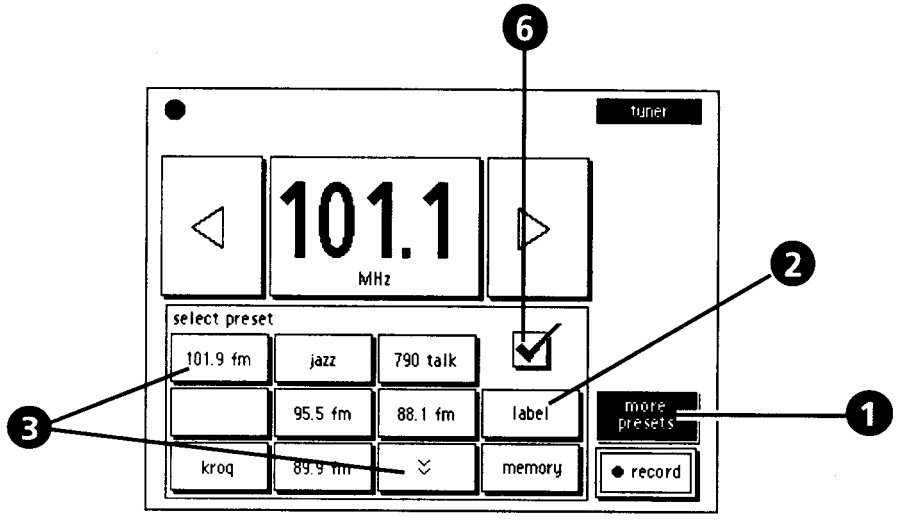
Creating or changing a tuner preset

1. On the Tuner screen, touch the MORE PRESETS button to display the Select Preset pop-up.
2. Tune the frequency you wish to program.
3. Touch the MEMORY button. The Stage 3 Controller temporarily memorizes the frequency.
4. Touch any TUNER PRESET button. The TouchPanel applies the memorized frequency to that button and changes the label to the frequency number. If you would like to change the label, see 'Labeling a tuner preset' next.
5. Repeat steps 2 to 4 for any other stations you want to set.
6. When you are done, thouch the CHECK-MARK to return to the Tuner screen.



Labeling a tuner preset

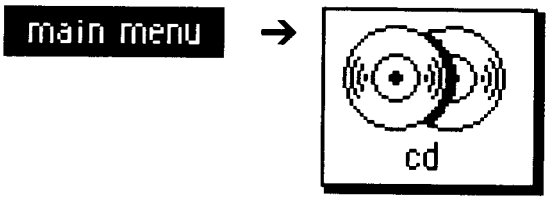
1. On the Tuner screen, touch the MORE PRESETS button to display the Select Preset pop-up.
2. Touch the LABEL button.
3. Touch any TUNER PRESET button you've already preset. (Use the arrow buttons to view more presets). The TouchPanel displays the Calculator Pad.
4. Use the Calculator Pad to create a label.
5. Repeat steps 2 to 4 for any other stations you want to label.
6. When you are done, touch the CHECK-MARK to return to the Tuner screen.



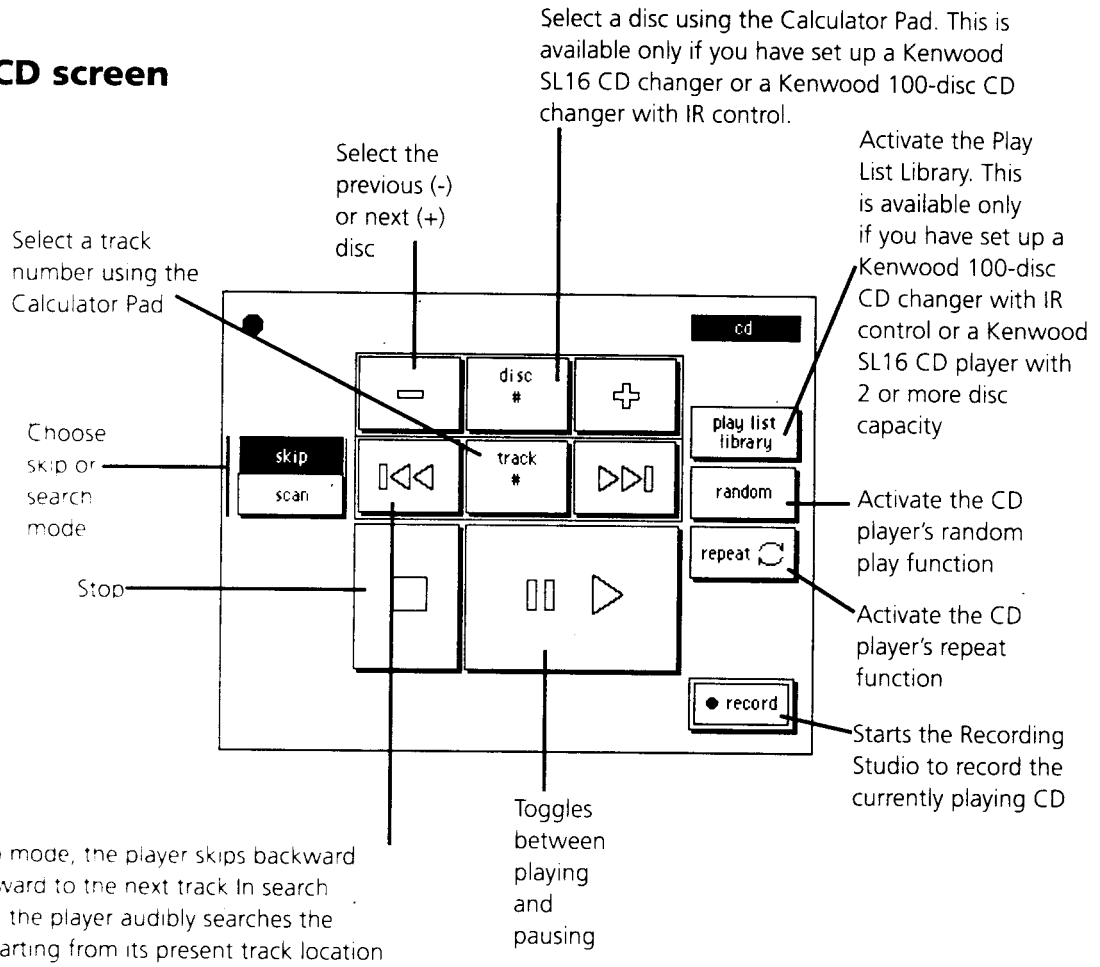
Using a CD player

You can use the CD screen to play CD's, search for specific tracks, and begin recording from a CD.

To get to the CD screen, touch these buttons:



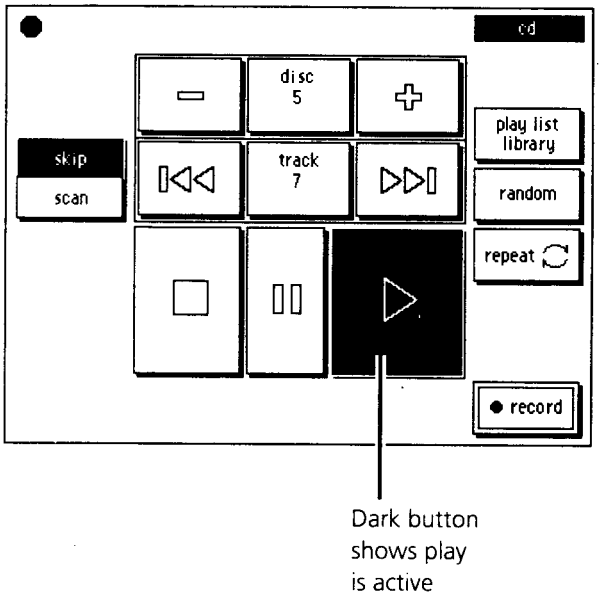
The CD screen


Select a disc using the Calculator Pad. This is available only if you have set up a Kenwood SL16 CD changer or a Kenwood 100-disc CD changer with IR control.
Select the previous (-) or next (+) disc
Select a track number using the Calculator Pad
Activate the Play List Library. This is available only if you have set up a Kenwood 100-disc CD changer with IR control or a Kenwood SL16 CD player with 2 or more disc capacity
cd
disc #
track #
skip
scan
play list library
random
repeat
record
Choose skip or search mode
Activate the CD player's random play function
Activate the CD player's repeat function
Stop
Starts the Recording Studio to record the currently playing CD
In skip mode, the player skips backward or forward to the next track In search mode, the player audibly searches the CD, starting from its present track location
Toggles between playing and pausing

If you have a Kenwood SL16 CD player

Kenwood SL-16 CD players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players:

- The TouchPanel's DISC and TRACK buttons will display the currently playing disc and track numbers.
- The TouchPanel will show separate PLAY and PAUSE buttons instead of the combination PLAY/PAUSE button.
- The TouchPanel's STOP, PAUSE, and PLAY buttons will remain dark when they're in use (instead of just momentarily turning dark) to let you know which mode is active.

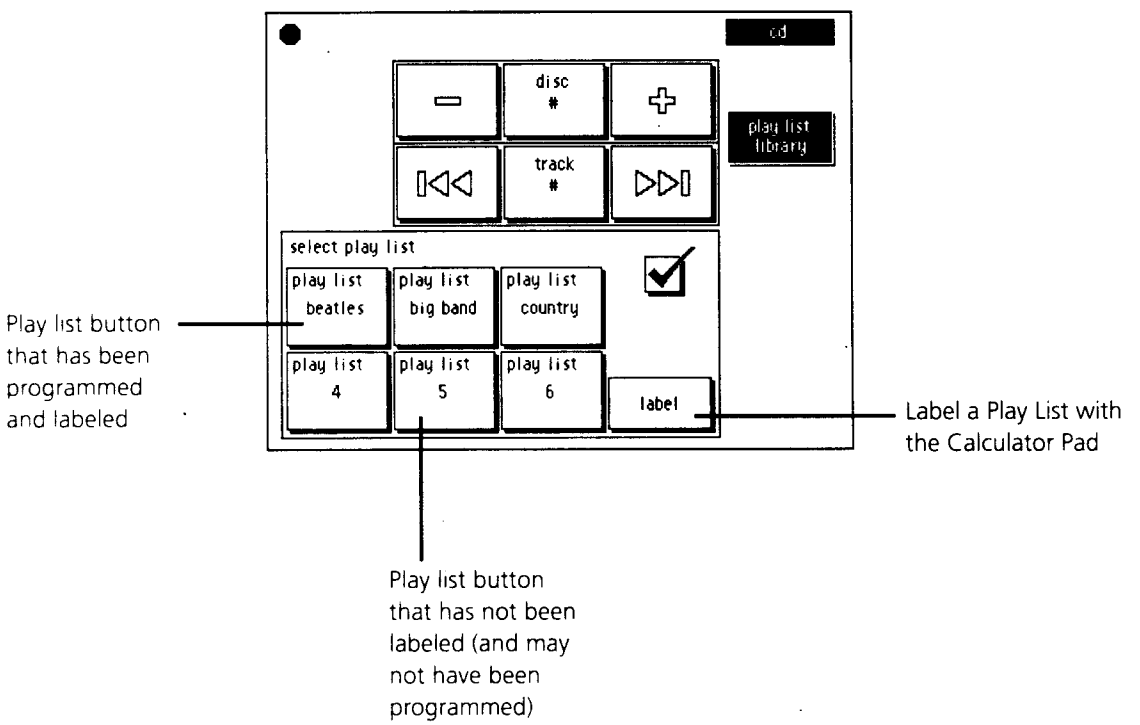


About CD play lists

If you have a Kenwood SL16 CD player that holds 2 or more discs, or a Kenwood 100-disc CD changer with IR control, you can use the TouchPanel to create and play custom combinations of songs. You can create up to 6 different play lists, each with up to 30 different songs, taken from any combination of CDs. If you have set up one of these CD changers and the PLAY LIST LIBRARY icon does not appear on the Kenwood CD control screen, check to be sure that you properly set up the CD player.

To get to the CD Play List pop-up, touch these buttons:

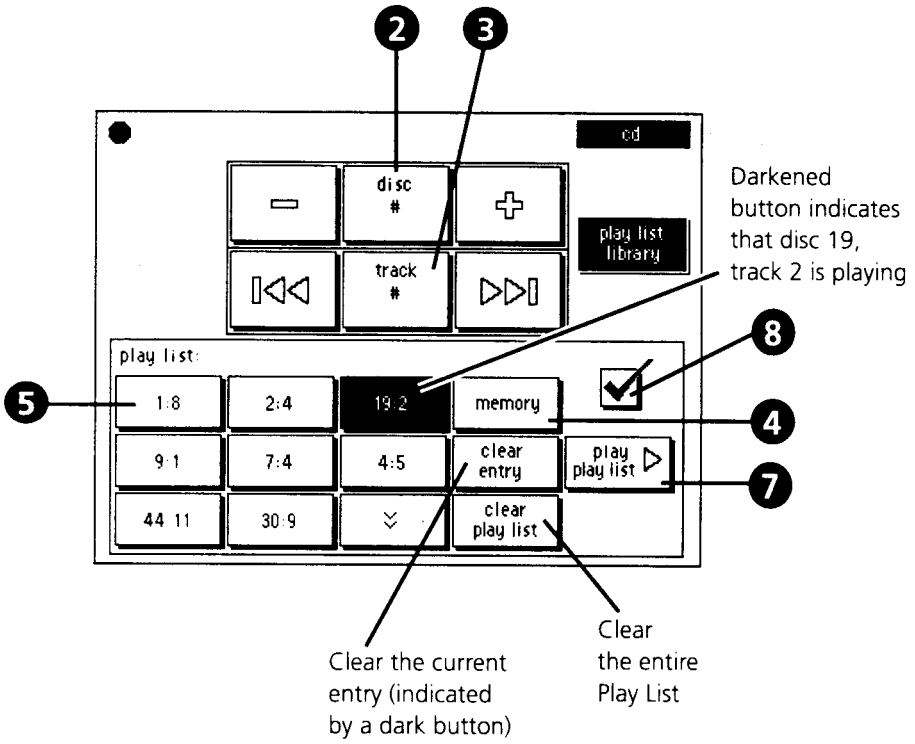
The Play List pop-up


cd
disc #
track #
play list library
select play list
play list beatles
play list big band
play list country
play list 4
play list 5
play list 6
label
Play list button that has been programmed and labeled
Label a Play List with the Calculator Pad
Play list button that has not been labeled (and may not have been programmed)

Touch the CHECK-MARK to exit from the Play List pop-up and return to the CD screen.

Creating a CD play list

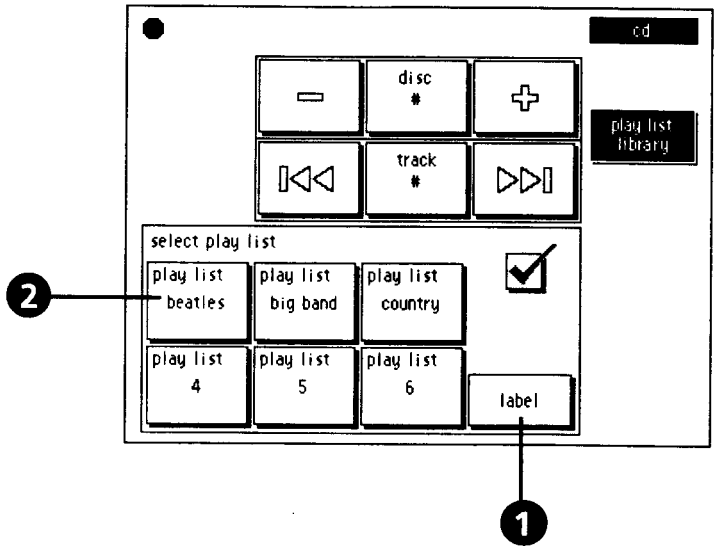
1. On the CD Play List pop-up, touch the button for the Play List you want to create.
2. Touch the DISC # button and enter the disc number using the Calculator Pad that appears.
3. Touch the TRACK # button and enter the track number using the Calculator Pad that appears.
4. Touch the MEMORY button to memorize your disc and track numbers.
5. Touch an ENTRY button. The TouchPanel applies the memorized selections to that button and changes the label to show the disc and track numbers.
6. Repeat steps 2 to 5 for each track you want to add to the Play List.
7. If you want to play the Play List, touch the and PLAY PLAY LIST button.
8. When you're done, touch the CHECK MARK to return to the CD screen.



NOTE: Because your CD Player will play the songs as you program them, you may want to turn it off while you create a Play List.

Labeling a CD play list

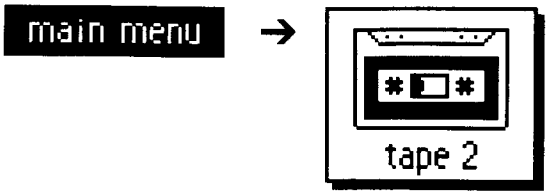
1. On the Select Play List pop-up, touch the LABEL button.
2. Touch the PLAY LIST you would like to label. The TouchPanel displays the Calculator Pad.
3. Enter a number or name for your Play List with the Calculator Pad. Any combination of letters and numbers is fine, up to 8 characters.
4. Touch the ENTER button to accept your label entry.
5. Touch the CHECK-MARK on the Calculator Pad. The label is applied to the PLAY LIST button and you are returned to the CD Play List screen.



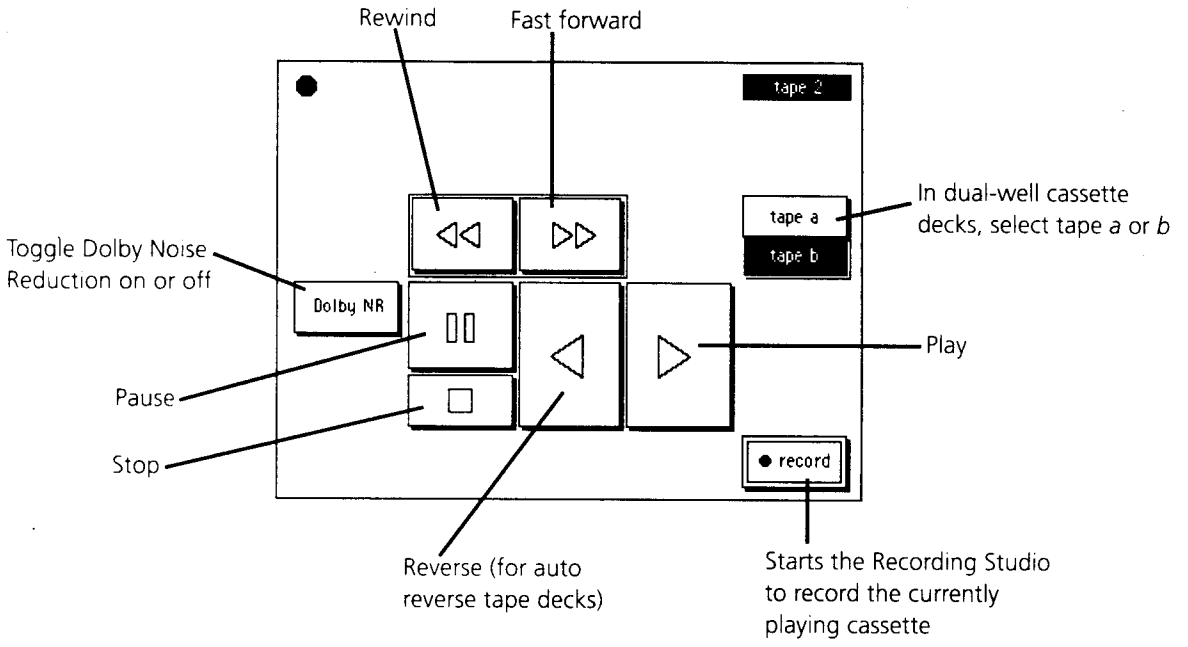
Using a tape deck

You can use the Tape screens (one for each of the up to 2 tape decks you have connected) to play tapes or start recording from a tape.

To get to a Tape screen, touch one of the tape buttons:



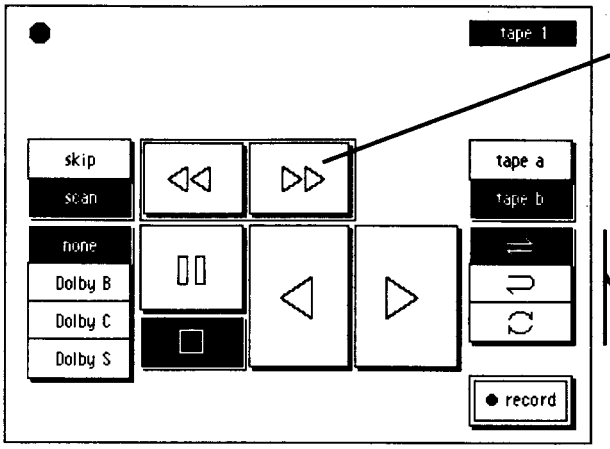
The Tape screen



If you have a Kenwood SL16 cassette deck

Kenwood SL16 cassette decks send information back to the TouchPanel. This means you'll have additional controls (on Tape-1 only) if you're using one of these decks.

- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.



Choose skip or scan mode

Choose the appropriate mode (or none) (see your cassette deck user's manual for information on Dolby Noise Reduction)

In skip mode, forwards the tape to the beginning of the next selection

In scan mode, continues to forward the tape until stop or play are selected

Play side a or side b

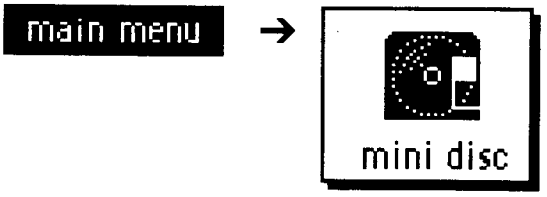
Play both sides of tape, one time only

Play both sides of tape, continuously

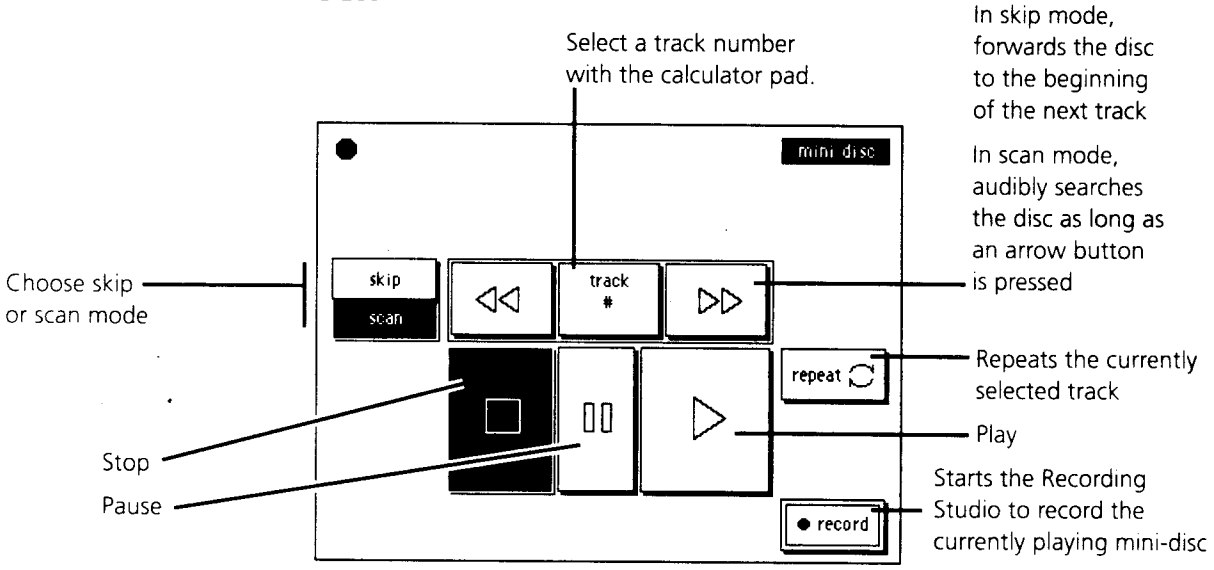
Using a mini-disc recorder

You can use the Mini-Disc screen to play mini-discs, search for specific tracks, or begin recording from a mini-misc.

To get to the Mini-Disc screen, touch these buttons:



The Mini-Disc screen


Select a track number with the calculator pad.
In skip mode, forwards the disc to the beginning of the next track
In scan mode, audibly searches the disc as long as an arrow button is pressed
mini disc
skip
scan
track #
repeat
Choose skip or scan mode
Repeats the currently selected track
Play
Stop
Pause
Starts the Recording Studio to record the currently playing mini-disc
record

If you have a Kenwood SL16 mini-disc recorder

Kenwood SL16 mini-disc recorders send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players.

- The TouchPanel's TRACK button will display the currently playing track number.
- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

Using other components

You can use a record player, personal stereo, or graphic equalizer with your system, even though they can't be controlled by the TouchPanel. To set up this type of unit, see *Setting up your KC-Z1 Controller.* Here's how to use such a device once you have it set-up:

To use a record player or personal stereo

1. Turn the component power on.
2. Touch the COMPONENT icon from the MAIN menu.
3. Begin play using the component's controls.
4. Modify sound settings from the Sound menu if you wish.

To use a graphic equalizer

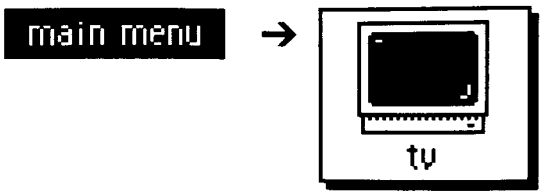
1. Turn the graphic equalizer power on.
2. Use the graphic equalizer's controls according to that component's instructions.

The graphic equalizer will not appear as a component icon on the TouchPanel screen, since it is not a sound-producing component.

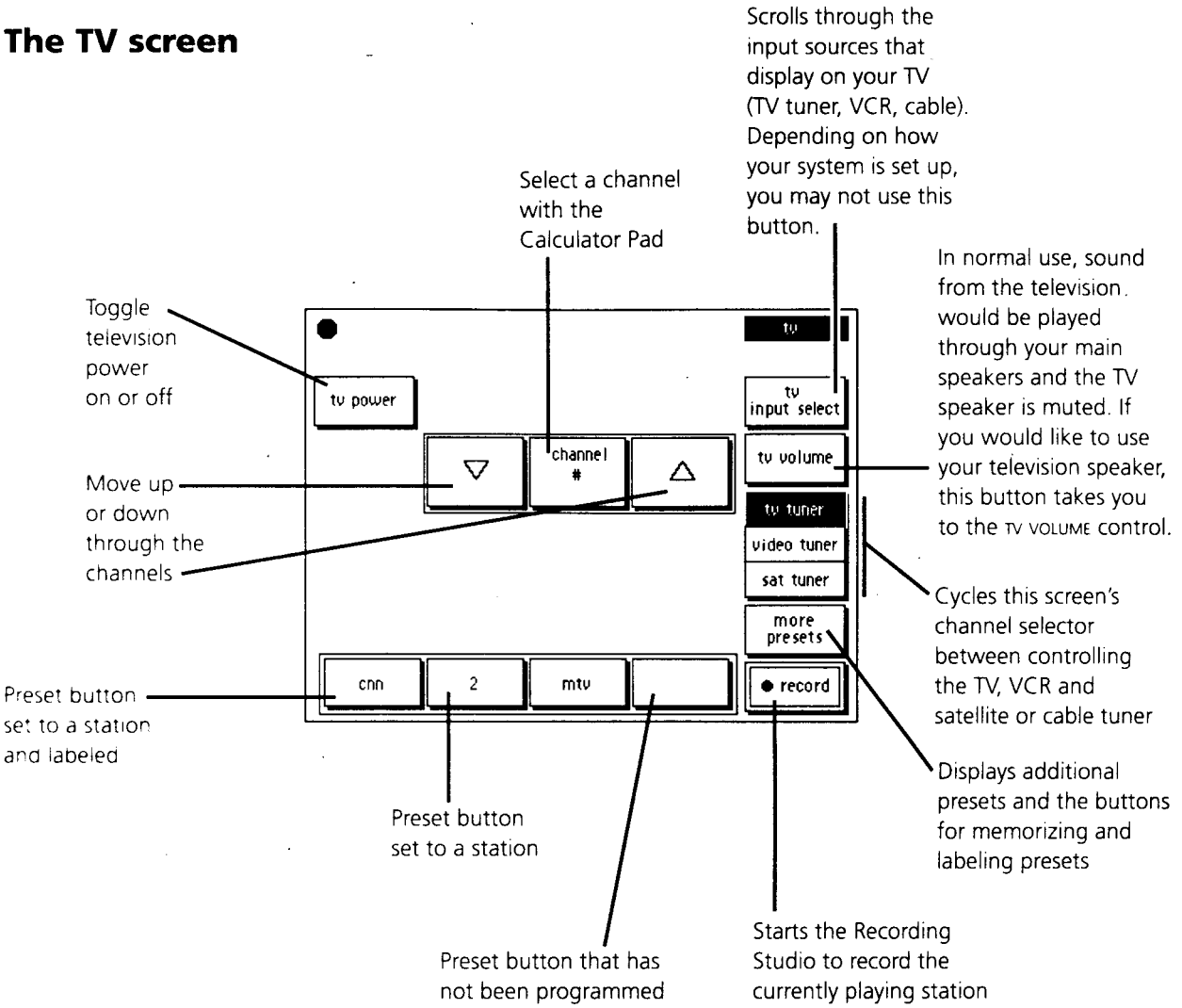
Using a television

You can use the TV screen to select TV stations, set up channel presets, and begin recording from a TV station.

To get to the TV screen, touch these buttons:

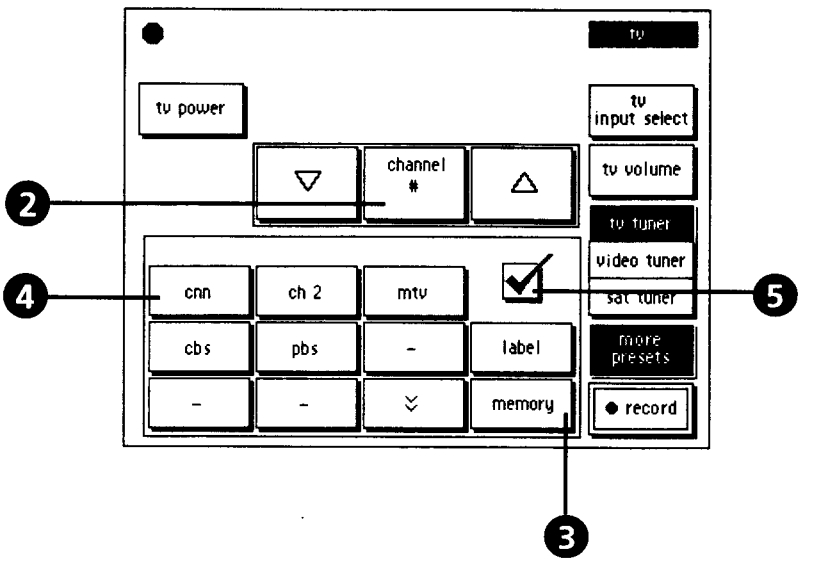


The TV screen


Scrolls through the input sources that display on your TV (TV tuner, VCR, cable). Depending on how your system is set up, you may not use this button.
Select a channel with the Calculator Pad
Toggle television power on or off
In normal use, sound from the television would be played through your main speakers and the TV speaker is muted. If you would like to use your television speaker, this button takes you to the TV VOLUME control.
Move up or down through the channels
Cycles this screen's channel selector between controlling the TV, VCR and satellite or cable tuner
Preset button set to a station and labeled
Displays additional presets and the buttons for memorizing and labeling presets
Preset button set to a station
Preset button that has not been programmed
Starts the Recording Studio to record the currently playing station
tv
tv power
channel #
tv input select
tv volume
tv tuner
video tuner
sat tuner
more presets
cnn
2
mtv
record

Creating or changing a channel preset

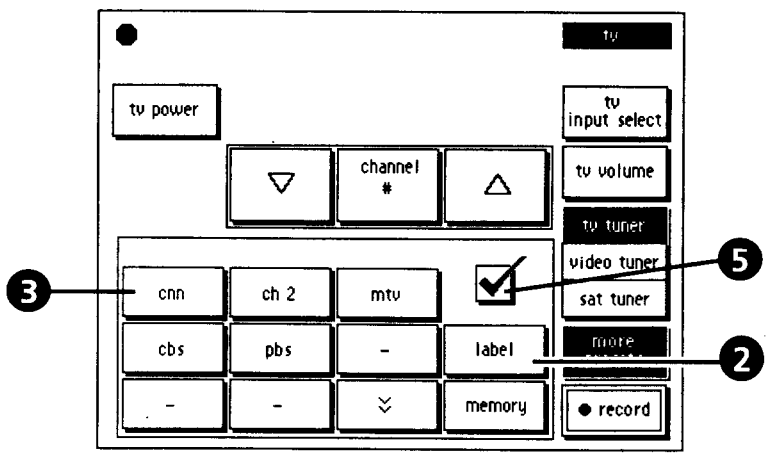
1. On the TV screen (on the TouchPanel), touch the MORE PRESETS button.
2. Tune the channel you wish to program
3. Touch the MEMORY button. The Stage 3 Controller temporarily memorizes the channel.
4. Touch any CHANNEL PRESET button. The TouchPanel applies the memorized frequency to that button and changes the label to the channel number.
5. When you are done, touch the CHECK-MARK to return to the TV screen.



Labeling a channel preset

Instead of the channel number, you can label Preset buttons to display the channel name (such as 'CBS' or 'MTV').

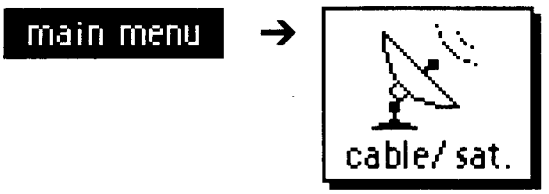
1. On the TV screen (on the TouchPanel), touch the MORE PRESETS button.
2. Touch the LABEL button.
3. Touch any CHANNEL PRESET button. (Use the ARROW buttons to view more Presets). The TouchPanel displays the Calculator Pad.
4. Enter the desired label with the Calculator Pad. (any combination of letters or numbers, up to 8 characters long).
5. When you are done, touch the check-mark to return to the TV screen.



Using a cable or satellite tuner

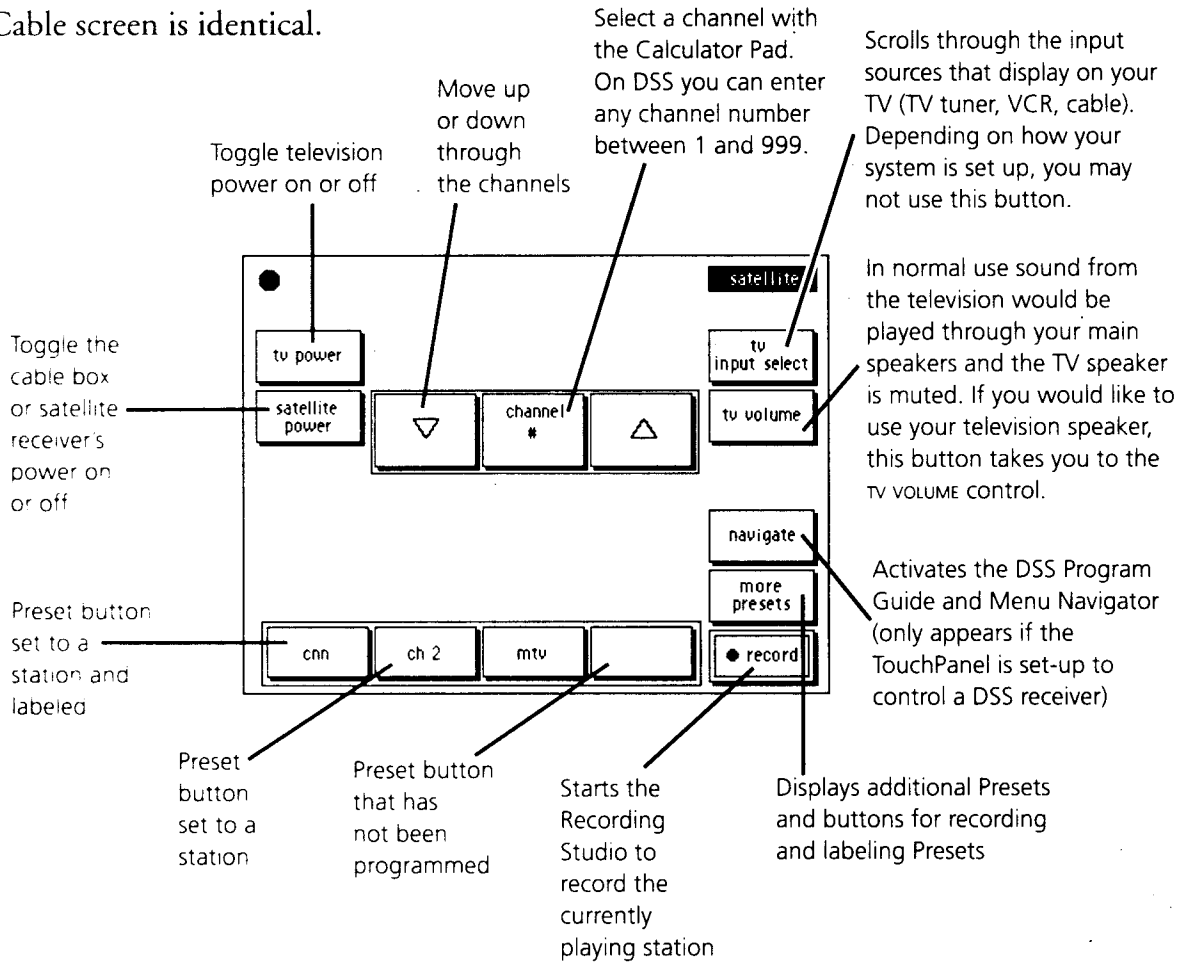
You can use the cable or satellite screens to select a cable or satellite TV station, set up channel Presets, or begin recording from a cable or satellite tuner.

To get to the CABLE/SATELLITE screen, touch these buttons:



The Satellite screen

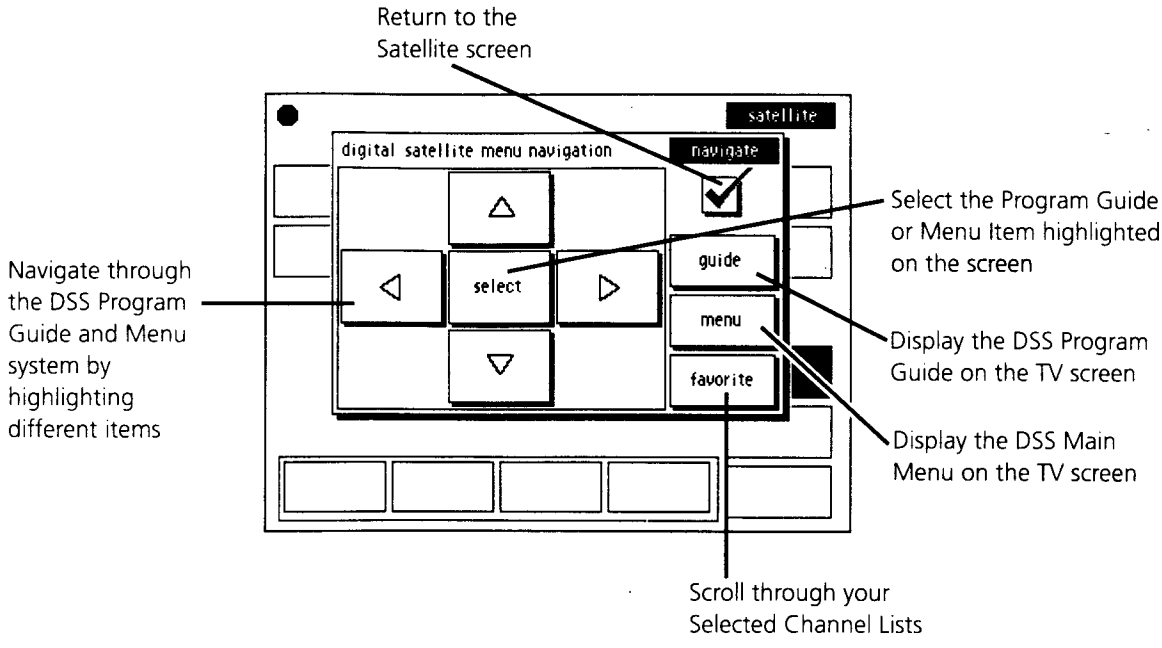
The Cable screen is identical.


Toggle television power on or off
Move up or down through the channels
Select a channel with the Calculator Pad. On DSS you can enter any channel number between 1 and 999.
Scrolls through the input sources that display on your TV (TV tuner, VCR, cable). Depending on how your system is set up, you may not use this button.
In normal use sound from the television would be played through your main speakers and the TV speaker is muted. If you would like to use your television speaker, this button takes you to the TV VOLUME control.
Toggle the cable box or satellite receiver's power on or off
Preset button set to a station and labeled
Activates the DSS Program Guide and Menu Navigator (only appears if the TouchPanel is set-up to control a DSS receiver)
satellite
tv power
satellite power
channel #
tv input select
tv volume
navigate
more presets
cnn
ch 2
mtv
record
Preset button set to a station
Preset button that has not been programmed
Starts the Recording Studio to record the currently playing station
Displays additional Presets and buttons for recording and labeling Presets

About presets

The channel presets that appear on the cable or satellite screens will be the same ones that you have set for your TV and VCR. To preset stations for your satellite system, use your DSS receiver's Favorite Channel List function or your satellite receiver's Preset Station Setting function.

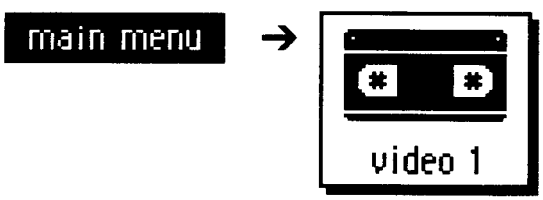
Using the DSS program guide navigator screen


Return to the Satellite screen
satellite
digital satellite menu navigation
navigate
select
guide
menu
favorite
Select the Program Guide or Menu Item highlighted on the screen
Navigate through the DSS Program Guide and Menu system by highlighting different items
Display the DSS Program Guide on the TV screen
Display the DSS Main Menu on the TV screen
Scroll through your Selected Channel Lists

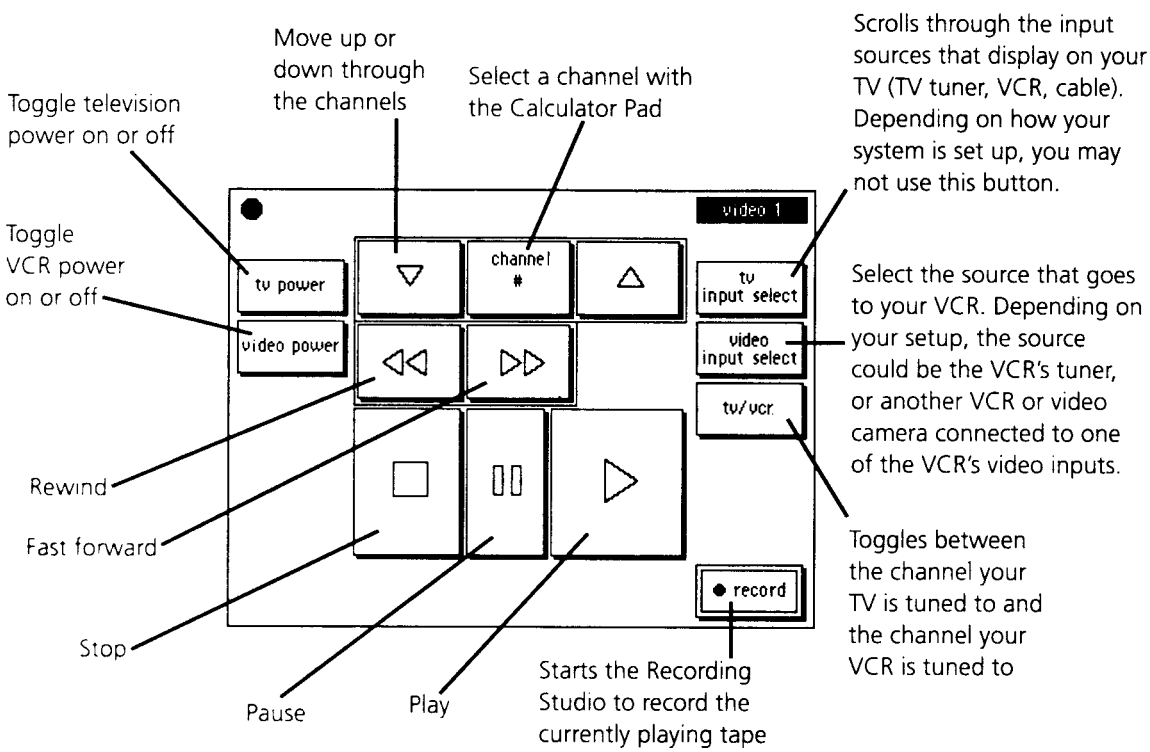
Using a VCR

You can use the Video screens (one for each of the VCRs you have connected) to play tapes or start recording from a tape.

To get to a Video screen, touch one of the video buttons:



The VCR screen


Move up or down through the channels
Select a channel with the Calculator Pad
Scrolls through the input sources that display on your TV (TV tuner, VCR, cable). Depending on how your system is set up, you may not use this button.
Toggle television power on or off
Toggle VCR power on or off
video 1
tv power
video power
channel #
tv input select
video input select
tv/vcr
record
Select the source that goes to your VCR. Depending on your setup, the source could be the VCR's tuner, or another VCR or video camera connected to one of the VCR's video inputs.
Rewind
Fast forward
Stop
Pause
Play
Starts the Recording Studio to record the currently playing tape
Toggles between the channel your TV is tuned to and the channel your VCR is tuned to

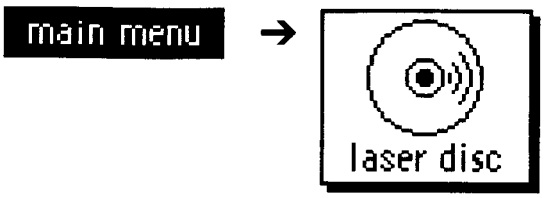
About recording

For instructions on recording to a VCR, see 'Recording' on page 49.

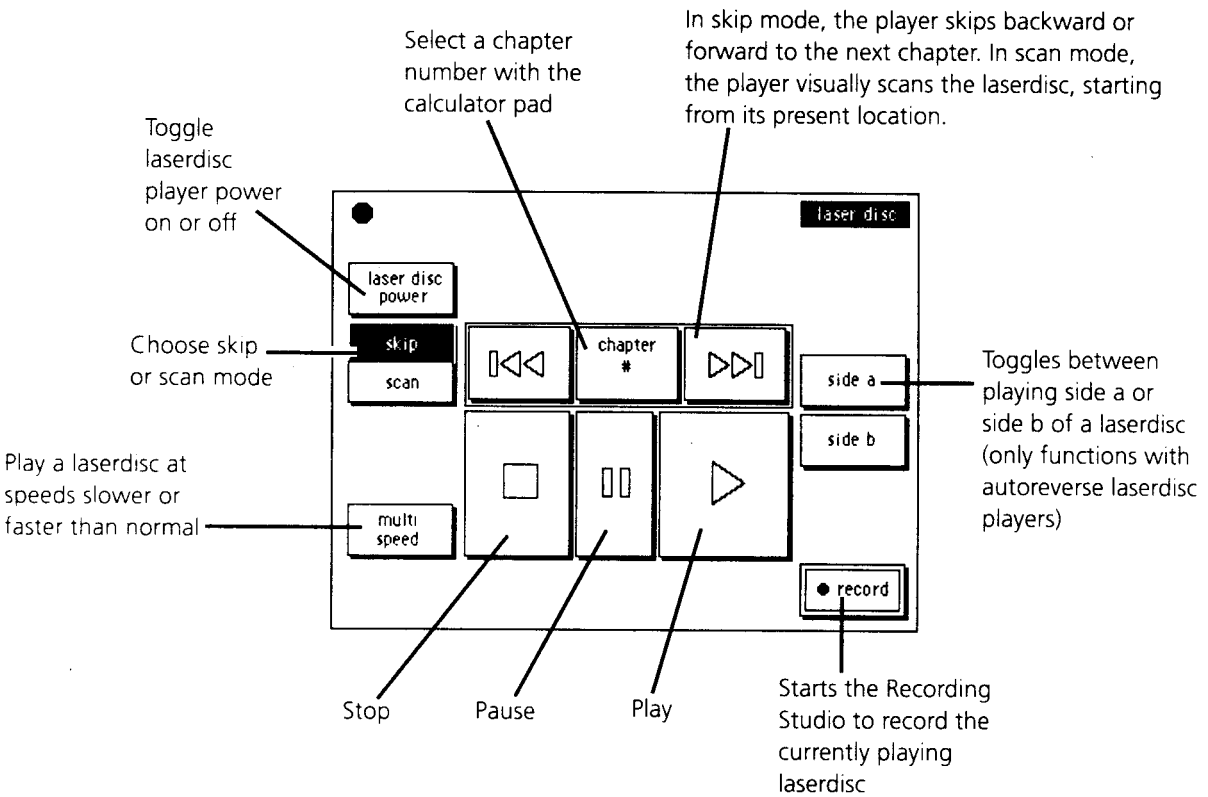
Using a laserdisc player

You can use the Laserdisc screen to play laserdiscs or start recording from a laserdisc.

To get to the Laserdisc screen, touch these buttons:

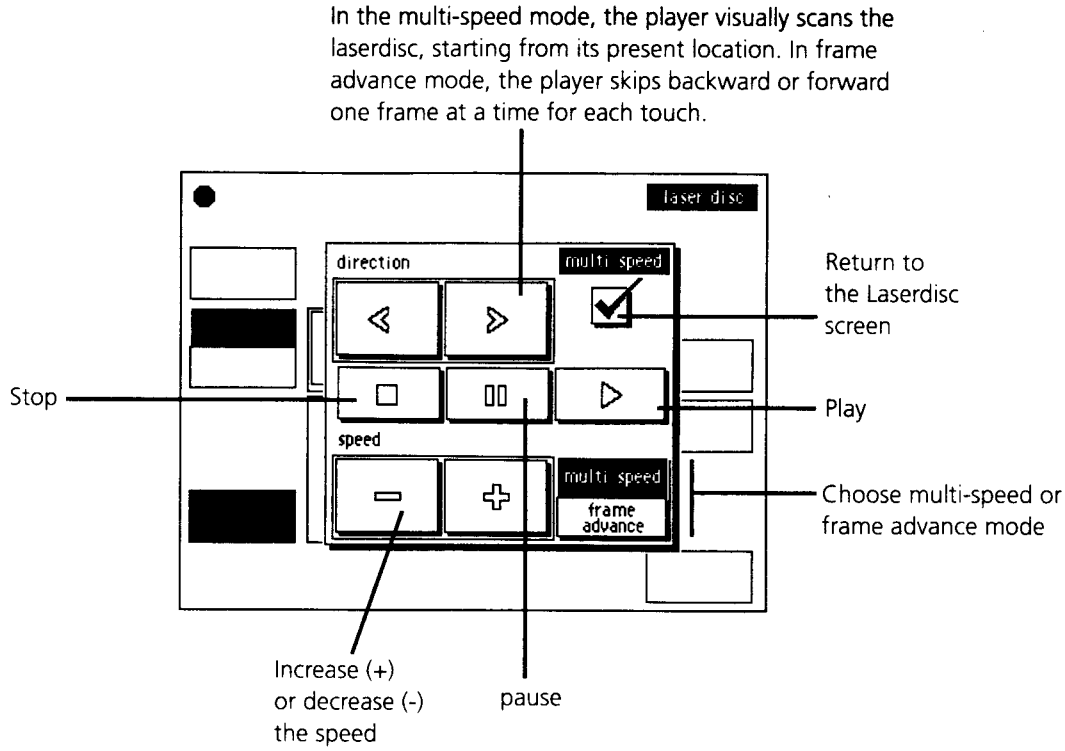


The Laser Disc screen


Select a chapter number with the calculator pad
In skip mode, the player skips backward or forward to the next chapter. In scan mode, the player visually scans the laserdisc, starting from its present location.
Toggle laserdisc player power on or off
laser disc
laser disc power
skip
scan
chapter #
side a
side b
Choose skip or scan mode
Toggles between playing side a or side b of a laserdisc (only functions with autoreverse laserdisc players)
Play a laserdisc at speeds slower or faster than normal
multi speed
record
Stop
Pause
Play
Starts the Recording Studio to record the currently playing laserdisc

Using the laserdisc multi-speed modes

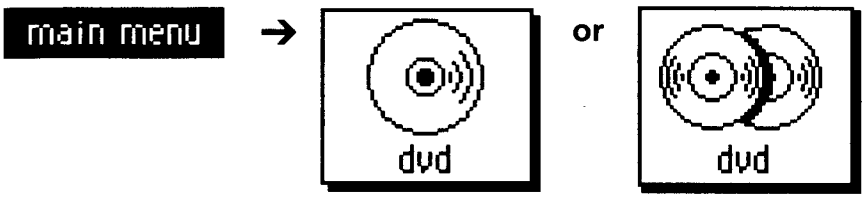
To use the multi-speed modes, you'll need either a special laser disc (one recorded in the CAV format) or a special laser disc player (one that supports digital special effects).


In the multi-speed mode, the player visually scans the laserdisc, starting from its present location. In frame advance mode, the player skips backward or forward one frame at a time for each touch.
laser disc
direction
multi speed
speed
multi speed
frame advance
Return to the Laserdisc screen
Stop
Play
Choose multi-speed or frame advance mode
Increase (+) or decrease (-) the speed
pause

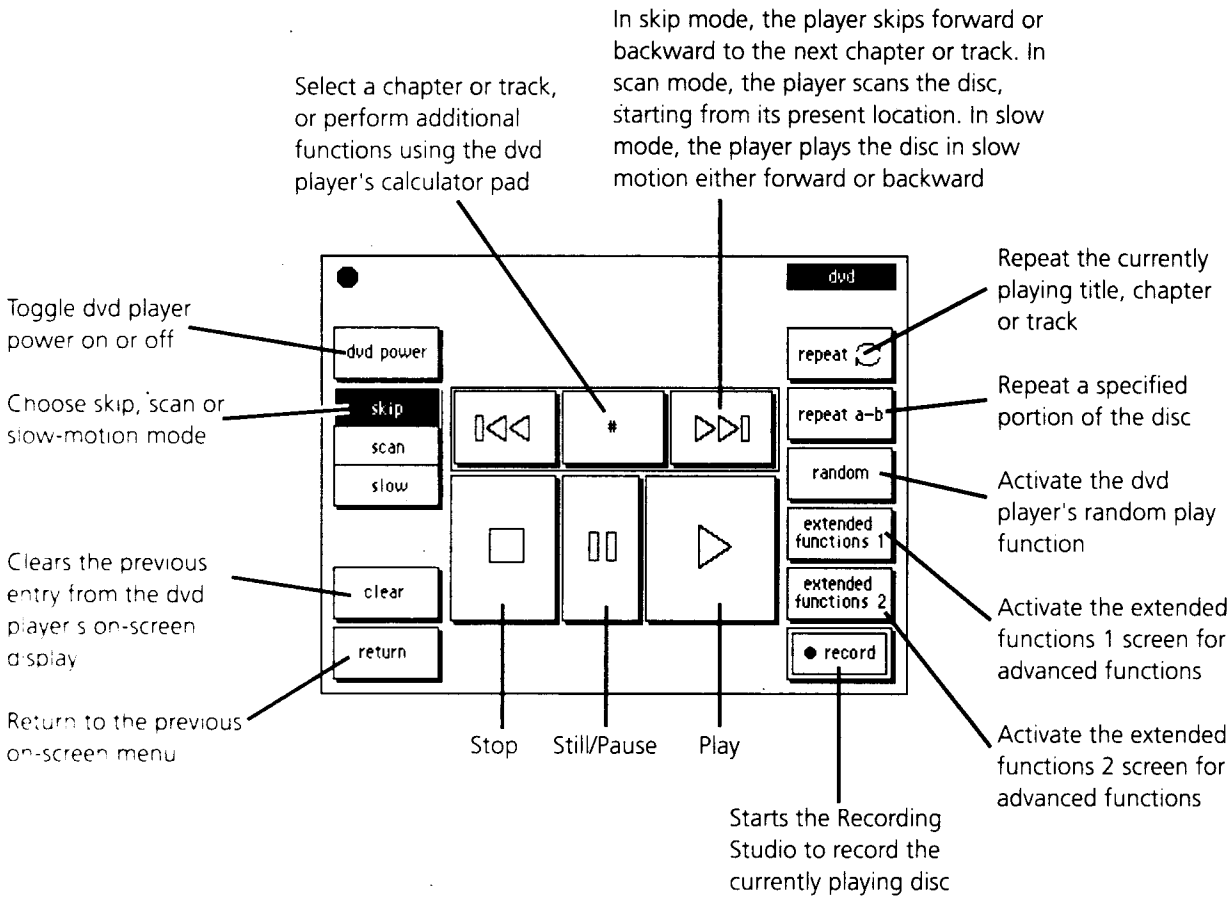
Using a DVD player

You can use the DVD screen to play DVDs or start recording from a DVD.

To get to the DVD screen, touch these buttons:



The DVD screen

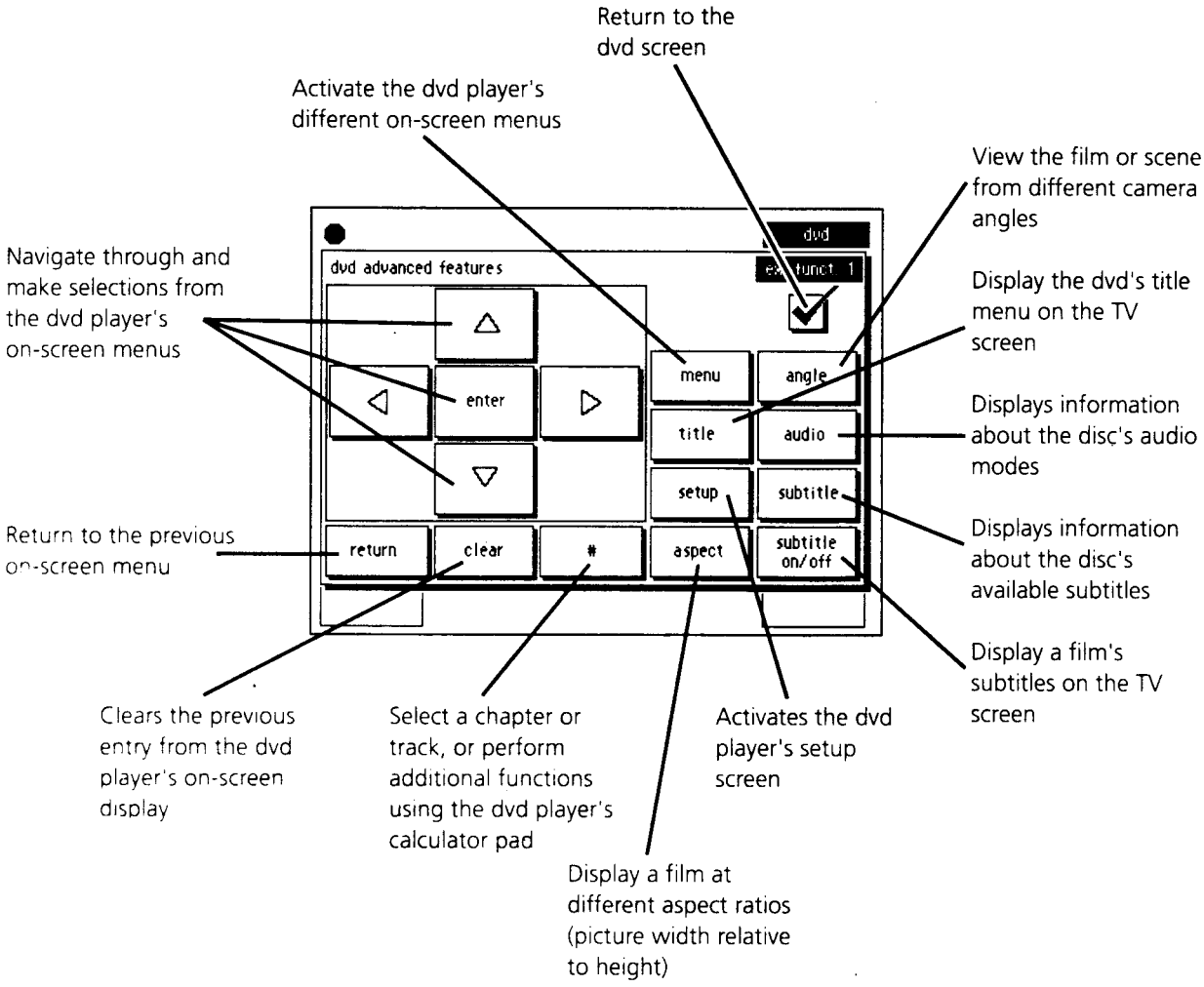

Select a chapter or track, or perform additional functions using the dvd player's calculator pad
In skip mode, the player skips forward or backward to the next chapter or track. In scan mode, the player scans the disc, starting from its present location. In slow mode, the player plays the disc in slow motion either forward or backward
Toggle dvd player power on or off
Choose skip, scan or slow-motion mode
Clears the previous entry from the dvd player s on-screen display
Return to the previous on-screen menu
dvd
dvd power
skip
scan
slow
clear
return
#
repeat
repeat a-b
random
extended functions 1
extended functions 2
record
Repeat the currently playing title, chapter or track
Repeat a specified portion of the disc
Activate the dvd player's random play function
Activate the extended functions 1 screen for advanced functions
Activate the extended functions 2 screen for advanced functions
Stop
Still/Pause
Play
Starts the Recording Studio to record the currently playing disc

Using a DVD player's advanced features

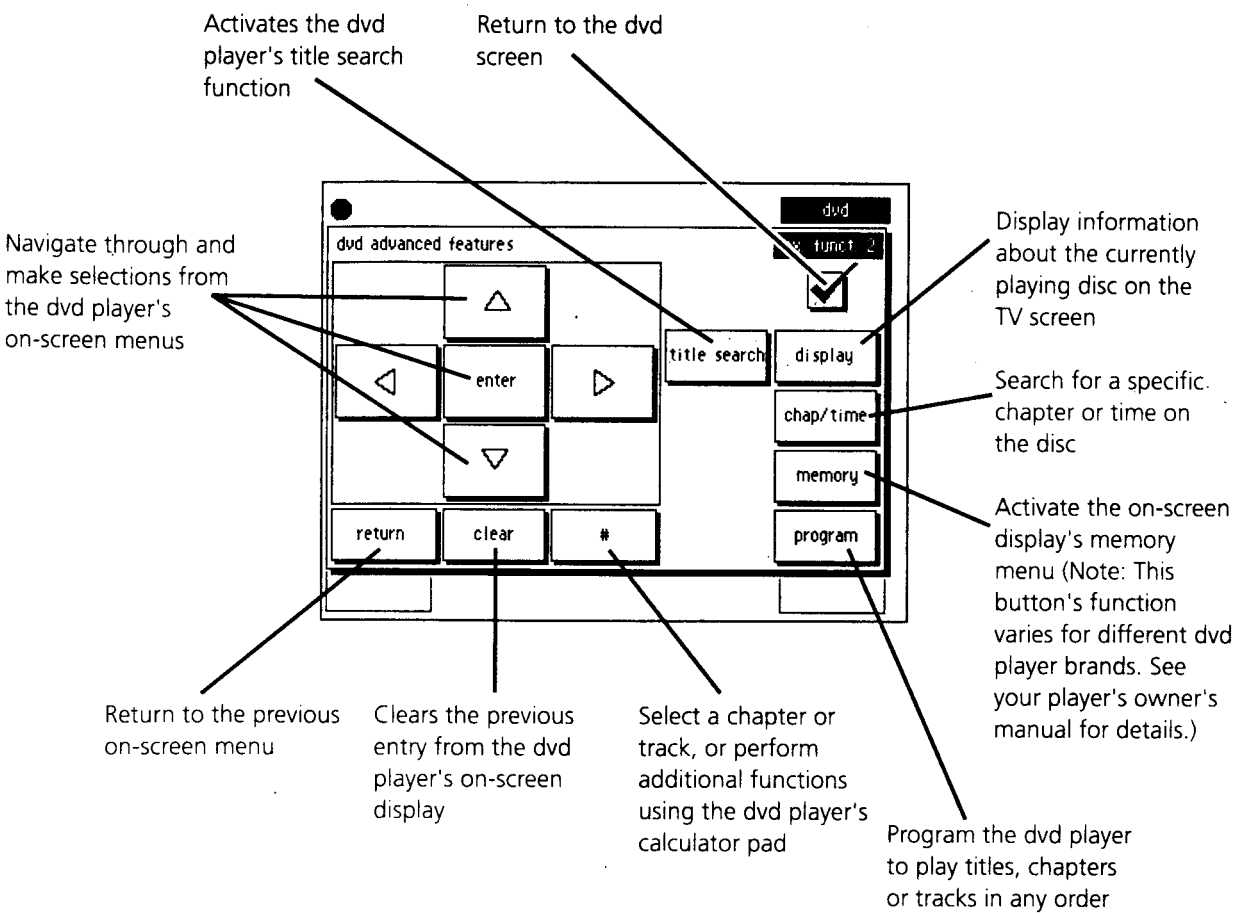
You can us the TouchPanel to control many of a DVD player's more advanced functions and features.

NOTE: Some of these features may or may not work depending on the particular DVD player you are using and the particular DVD disc you are playing. Check your DVD player's owner's manual and the DVD disc's packaging for further information.

The Extended Functions 1 screen

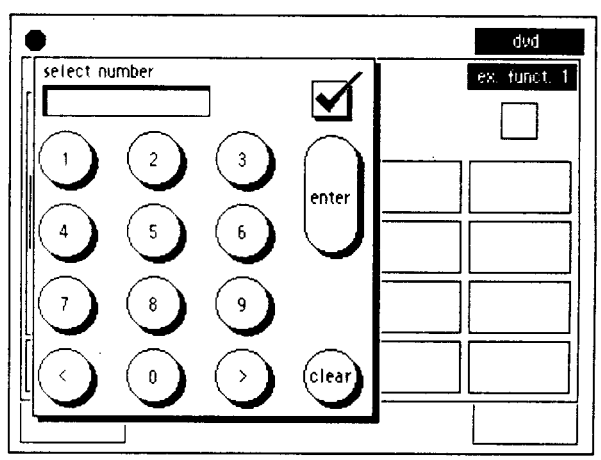

Return to the dvd screen
Activate the dvd player's different on-screen menus
View the film or scene from different camera angles
Navigate through and make selections from the dvd player's on-screen menus
Display the dvd's title menu on the TV screen
Displays information about the disc's audio modes
Return to the previous on-screen menu
Displays information about the disc's available subtitles
Display a film's subtitles on the TV screen
Clears the previous entry from the dvd player's on-screen display
Select a chapter or track, or perform additional functions using the dvd player's calculator pad
Activates the dvd player's setup screen
Display a film at different aspect ratios (picture width relative to height)
dvd
dvd advanced features
ext funct 1
enter
menu
angle
title
audio
setup
subtitle
return
clear
#
aspect
subtitle on/off

The Extended Functions 2 screen


Activates the dvd player's title search function
Return to the dvd screen
Navigate through and make selections from the dvd player's on-screen menus
Display information about the currently playing disc on the TV screen
Search for a specific chapter or time on the disc
Activate the on-screen display's memory menu (Note: This button's function varies for different dvd player brands. See your player's owner's manual for details.)
Return to the previous on-screen menu
Clears the previous entry from the dvd player's on-screen display
Select a chapter or track, or perform additional functions using the dvd player's calculator pad
Program the dvd player to play titles, chapters or tracks in any order
dvd
dvd advanced features
ex. funct. 2
enter
title search
display
chap/time
memory
return
clear
#
program

The DVD calculator pad

The calculator pad works a little differently for DVD than it does for other sources. (Most DVD players use the calculator pad to access different features in addition to entering chapter and track numbers.) Check your DVD's user manual for information about using the calculator pad to access different features and functions.



Adjusting sound

To view or change the current settings, touch the SOUND button when you're using any component. When you're finished making changes, touching the CHECK-MARK will return you to the controls of the component you were using.

From the Sound menu you can:

- Select an audio mode: Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby Pro Logic, or Dolby Digital (AC-3).
- Add sound processing: THX Cinema (for more accurate film sound) and DSP Logic (for simulated room sound).
- Adjust Bass and Treble.
- Select Midnight mode for quiet listening.
- Control speaker delay and sound level.
- Reset sound settings to their default value.

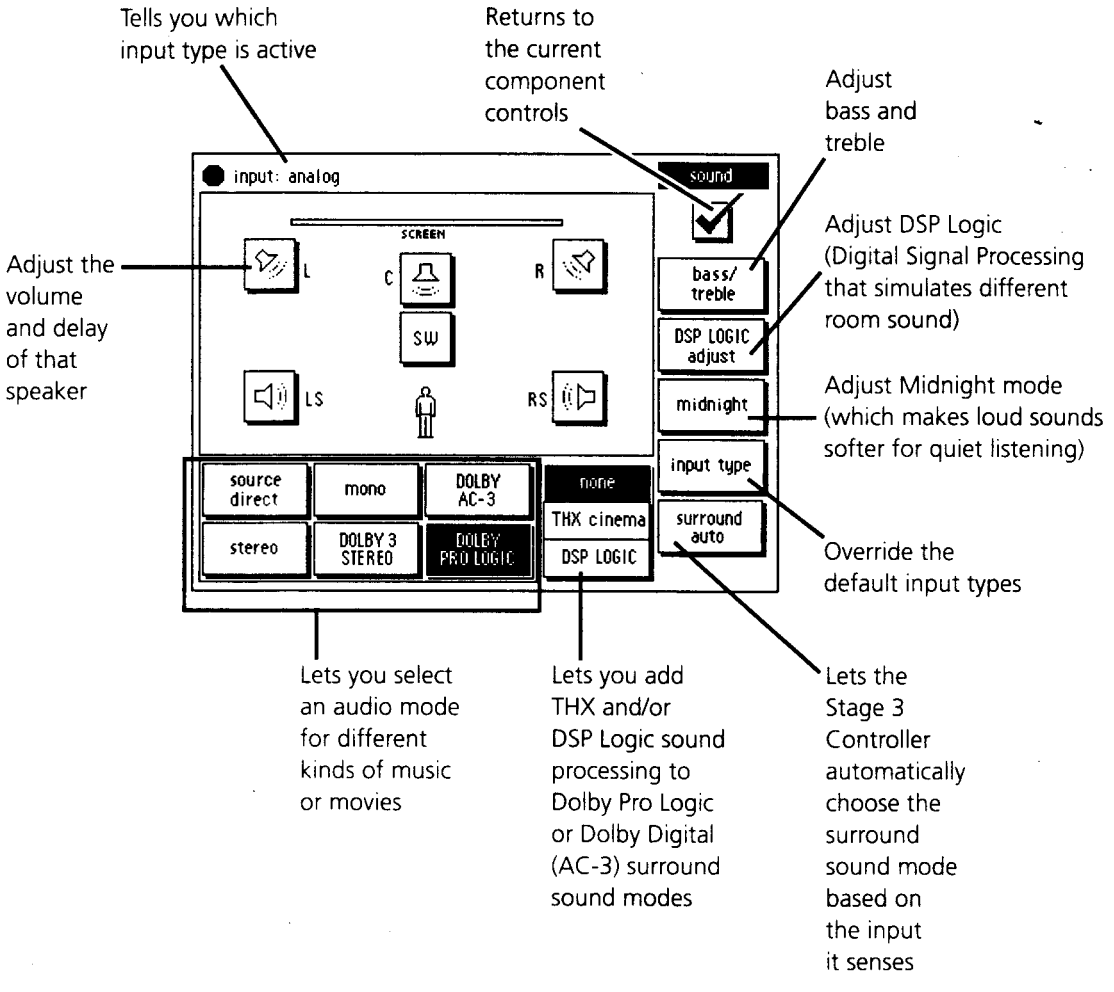
Saving your settings

Any changes you make from the Sound menu, plus the settings for the current component, can be saved as a System Preset. See the chapter 'Using system presets' later in this booklet.

Accessing sound controls

To get to the Sound screen, touch this button:

The following sound controls are available:


Tells you which input type is active
Returns to the current component controls
Adjust bass and treble
Adjust DSP Logic (Digital Signal Processing that simulates different room sound)
Adjust Midnight mode (which makes loud sounds softer for quiet listening)
Override the default input types
Adjust the volume and delay of that speaker
input: analog
sound
SCREEN
L
C
R
SW
LS
RS
bass/ treble
DSP LOGIC adjust
midnight
input type
surround auto
source direct
mono
DOLBY AC-3
stereo
DOLBY 3 STEREO
DOLBY PRO LOGIC
none
THX cinema
DSP LOGIC
Lets you select an audio mode for different kinds of music or movies
Lets you add THX and/or DSP Logic sound processing to Dolby Pro Logic or Dolby Digital (AC-3) surround sound modes
Lets the Stage 3 Controller automatically choose the surround sound mode based on the input it senses

About Surround Auto

If SURROUND AUTO is ON, the Stage3 Controller will automatically choose the best input type from among those that are connected to the active source. The priority is: RF, Digital Coaxial, Digital Optical, Analog.

About the audio modes

You can choose from six audio modes, including three music modes (source direct, mono, and stereo) and three surround-sound modes (Dolby 3 Stereo, Dolby Surround Pro Logic, and Dolby Digital [AC-3]).

When you select an Audio Mode, the TouchPanel uses darkened icons to show you which speakers are producing sound in that mode (if your system includes a subwoofer it will remain active in all audio modes). For example, in Stereo mode, the left and right speaker icons will be darkened, and so will the subwoofer icon if you have a subwoofer installed. In Dolby Digital (AC-3) mode, the left, center, right, surround, and subwoofer speaker icons would be darkened.

Source Direct

Plays the audio source in stereo, bypassing all of the Stage 3 Controller's digital, surround, and tone control circuitry. This allows you to listen to a stereo recording in the purest possible way. (Source Direct operates only with components connected using the Stage 3 Controller's analog inputs).

Stereo

Plays the audio source in stereo using only the left and right speakers and applies any adjustments you've made on the Bass and Treble Menu.

Mono

Plays the audio source in monaural using only the center speaker only. If your system does not have a center speaker, the monaural sound will come through the left and right speakers.

Dolby 3 Stereo

Plays the audio source through the left, center and right speakers. For music, this retains a stereo sound, with improved imaging and definition, especially for multiple listeners. For home theater, this mode is only useful if you are not using surround speakers in your system.

Dolby Pro Logic

Plays the audio source through the left, center, right and surround speakers, using Dolby Pro Logic decoding for surround sound. This is the standard setting for Dolby Surround-encoded video tapes, laser discs, and TV broadcasts.

Dolby Digital (AC-3)

Plays the audio source through the left, center, right and surround speakers, using Dolby Digital (AC-3) decoding for surround sound. This is the setting to be used on DVDs and laser discs or other sources that are labeled 'Dolby Digital (AC-3)'.

Surround Auto

If the input is CD, mini disc, tuner, phono or tape, the Controller automatically selects stereo mode. If the input is TV, laser disc, cable/sattelite or video, the Controller selects Dolby Surround Pro Logic mode. If the source is recorded in Dolby Digital (AC-3), the Controller selects Dolby Digital (AC-3) mode. (You can still select any surround mode manually).

What you can change

The audio modes you can select depend on the speakers you have installed in your system.

If your system has	You can select
Left and Right speakers	Source Direct, Stereo, Mono, Dolby AC-3
Left, Center and Right speakers	Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby AC-3
Left, Right and Surround speakers	Source Direct, Stereo, Mono, Dolby Surround Pro Logic, Dolby AC-3
Left, Center, Right and Surround speakers	Source Direct, Stereo, Mono, Dolby 3 Stereo, Dolby Surround Pro Logic, Dolby AC-3

NOTE: Dolby Digital (AC-3) sources will play with any speaker configuration. If your system lacks surround or center speakers, the Stage 3 Controller will blend the information for those channels into the left and right speakers.

Adding sound processing

The Stage 3 Controller offers 3 choices for sound processing: THX Cinema, DSP Logic, and none:

THX Cinema

Because a film's soundtrack is meant to be heard in a large theater with dozens of speakers, movies can sound much different when played in a typical room at home. THX Cinema sound processing is special circuitry developed by Lucasfilm, LTD, that corrects this problem. THX Cinema adjusts tone, compensates for how our ears hear directional sound, and creates a more spacious, enveloping surround-sound environment. The result is sound that matches as closely as possible the sound created by the movie's director and sound technicians.

Keep in mind these points about THX Cinema processing:

- THX Cinema processing can only adjust sound that has already been decoded by a surround-sound decoder, and so it is only available when the Controller is in Dolby Digital (AC-3) or Dolby Surround Pro Logic mode.
- Use THX Cinema processing for films marked Dolby Digital (AC-3), Dolby Surround, or Dolby Stereo (a term used to denote Dolby Surround that you may find on older laserdiscs and videotapes).
- Activating the THX Cinema mode automatically resets the bass and treble controls to their flat settings. Once you activate THX Cinema mode, you can boost or cut the bass and treble settings as you like. When you exit THX Cinema mode, the bass and treble settings will return to the values they were at before you selected THX Cinema.

DSP Logic

Combines the surround sound of Dolby Digital (Dolby AC-3) and Dolby Surround Pro Logic with proprietary Kenwood Digital Signal Processing. This lets you personalize the listening environment to simulate the way films (or music) would sound in different rooms, from the intimate environment of a jazz club to the spaciousness of a large theater.

- You can use DSP Logic processing for any Dolby Digital (AC-3), Dolby Surround or stereo music programs.
- DSP Logic processing is only available in the Dolby Digital (AC-3) and Dolby Surround Pro Logic modes.

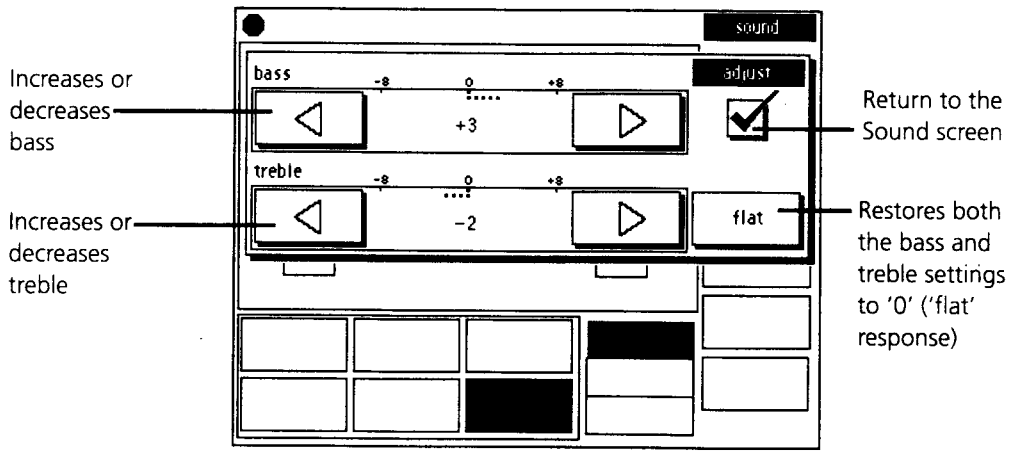
For instructions on how to adjust the DSP Logic settings, see 'Adjusting DSP Logic' on page 45.

None

Turns off both THX Cinema and DSP Logic processing.

Adjusting bass and treble

To get to the Bass/Treble Adjust screen, touch these buttons:



Any changes you make on this screen are erased (and the settings reset to '0') when you:

- Change input sources
- Activate the Surround Auto mode
- Put the Controller in Standby mode (shut-down the system)

You can save changes in bass and treble level as part of a System Preset.

Adjusting DSP Logic

To get to the DSP LOGIC screen, touch these buttons:

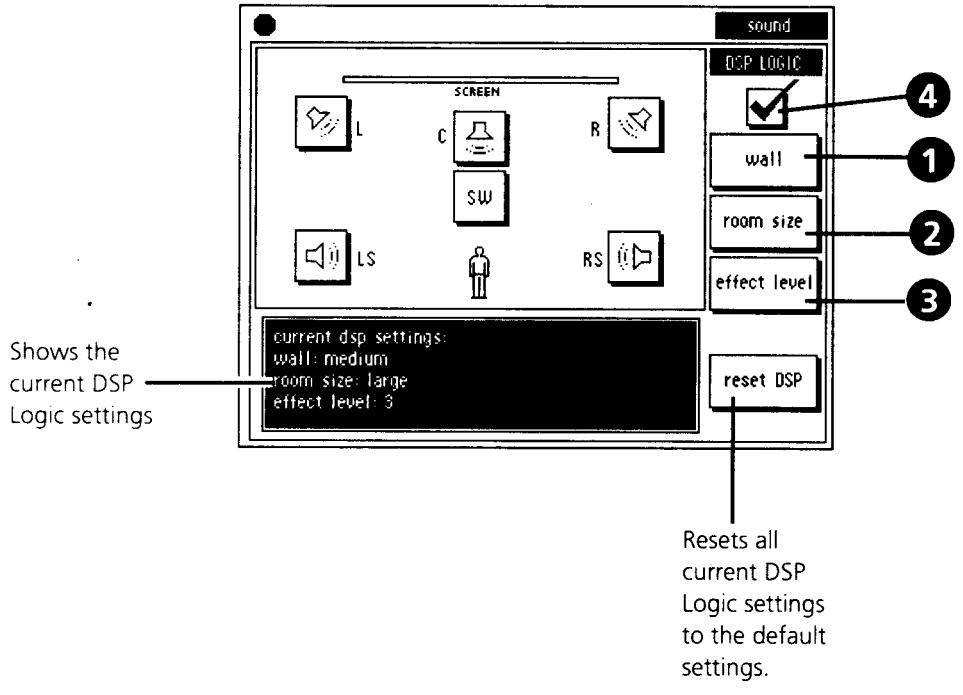
main menu → sound → DSP LOGIC adjust

1. Touch the WALL button. You can select from 3 different wall textures. SOFT makes the simulated walls absorb more sound (such as in a room full of people), while HARD makes them reflect more sound (like a theater that's nearly empty).

2. Touch the ROOM SIZE button. You can select from 3 different room sizes. The sizes refer to public spaces, so SMALL might be used to simulate a more intimate club, while LARGE could be used to simulate a large theater.

3. Touch the EFFECT LEVEL button. You can change the effect level from 1 (very little effect) to 5 (maximum effect).

4. When you are done, touch the CHECK-MARK to return to the Setup screen.



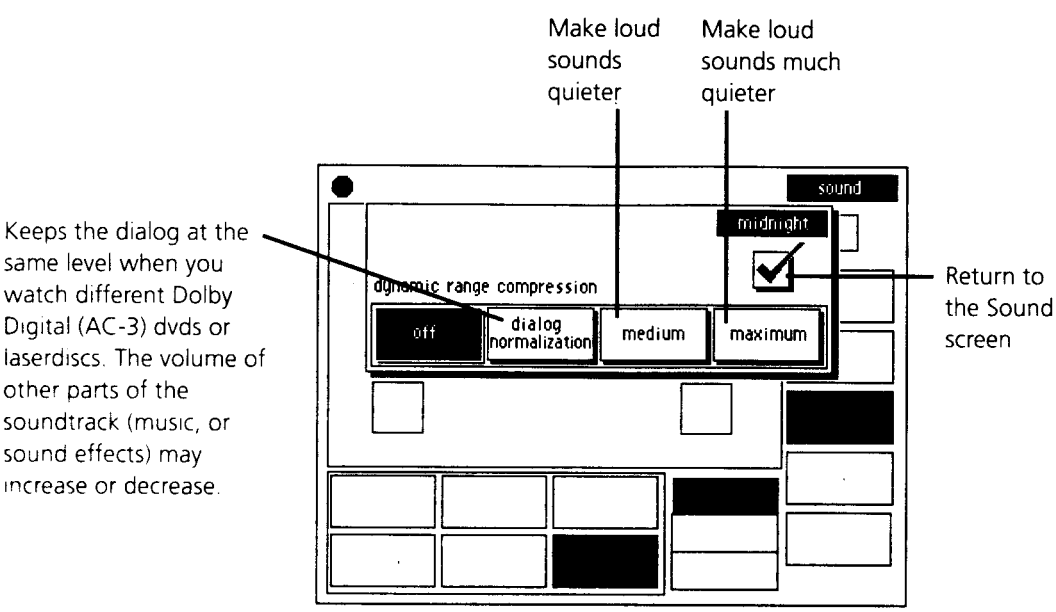
Adjusting for quiet listening

Midnight mode dynamic range compression makes the quiet and loud parts of a movie or music closer to the same level. This lets you turn up the sound so you can hear the quiet parts without being surprised by a loud part.

NOTE: Midnight mode only works with Dolby Digital (AC-3) programs that have been specially encoded.

To get to the Midnight screen, touch these butons:

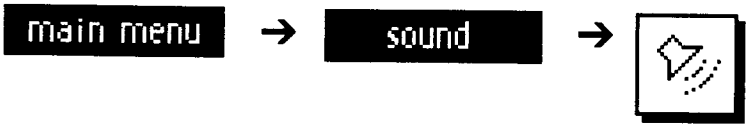
main menu → sound → midnight

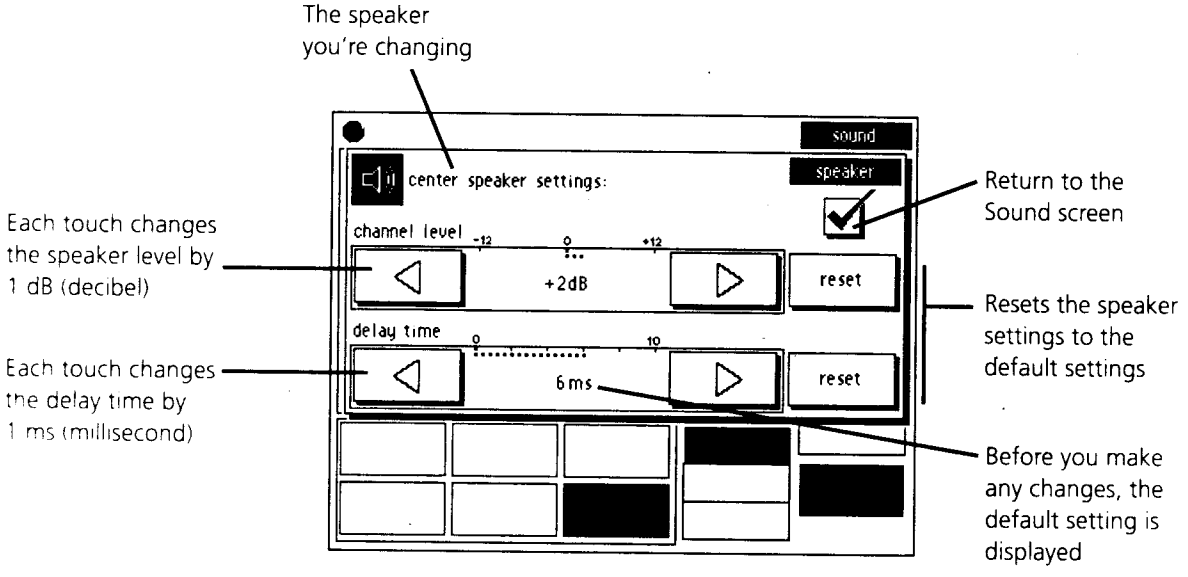

Make loud sounds quieter
Make loud sounds much quieter
Keeps the dialog at the same level when you watch different Dolby Digital (AC-3) dvds or laserdiscs. The volume of other parts of the soundtrack (music, or sound effects) may increase or decrease.
sound
midnight
dynamic range compression
off
dialog normalization
medium
maximum
Return to the Sound screen

Adjusting speaker delay and level

When you set up your system, you set the default settings for Delay Time by setting the distance between all of your speakers. You can, if you want, change the delay time and level.

To get to the Speaker screen, touch these buttons:





Any changes you make on this screen are erased (and the settings reset to their default settings) when you:

- Change input sources
- Activate the Surround Auto mode
- Put the Controller in Standby Mode (shut-down the system)

You can save changes in speaker level and delay time as part of a System Preset.

Selecting the audio input type

For normal use we suggest that you allow the Stage 3 Controller to select the optimum input type for you using the system's default settings.

If you are an expert user and would like to make input type changes the following input types are available, depending on the connections made to your source components:

1. Make sure you have turned off Surround Auto (see page 47).
2. If you are not on the Input Type screen, touch these buttons:

3. Depending on how you have connected your components, select from the following input types:
   - RF (for laserdisc players with Dolby Digital [AC-3] RF outputs)
   - Digital Coaxial (for CD players, laserdisc players, DVD players, mini disc recorders and satellite receivers with coaxial digital outputs)
   - Digital Optical (for CD players, laserdisc players, DVD players, mini disc recorders and satellite receivers with TOS-link optical digital outputs)
   - Analog (for all components that have standard RCA-type analog outputs).
4. Touch the CHECK-MARK to return to the Sound screen.

About Digital Recording

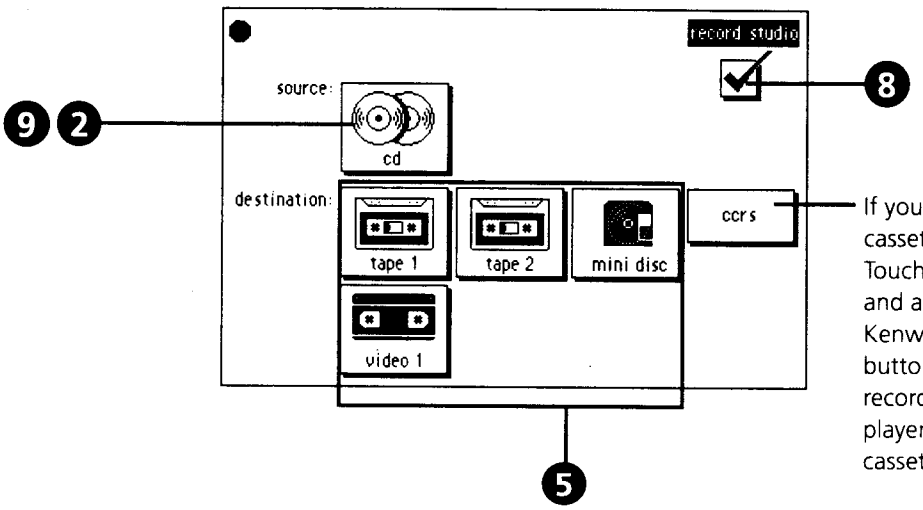
If you have activated the Digital Coaxial or Optical Input for a component, it cannot be used as a source for recording (except to make a digital recording onto a mini disc).

Recording

The Recording Studio function allows you to select a source component to record from, and a destination component to record onto, and lets you control them both from the TouchPanel.

General instructions for the Recording Studio

1. To activate the Record Studio, press the RECORD button in the lower right corner of almost any TouchPanel screen. The component you're listening to becomes the source component for the recording. The TouchPanel then displays the Record Studio screen.



If you have a Kenwood cassette deck with One-Touch Recording (CCRS) and a compatible SL16 Kenwood CD player, this button will begin automatic recording from the CD player to the tape 1 cassette deck

2. Touch the SOURCE COMPONENT icon on the Record Studio screen.

3. Prepare the source for recording by cueing up the selection you wish to record (the procedure for this will depend upon the specific component you have).

4. Touch the RECORD icon in the lower right corner of the source component's screen to return to the Record Studio screen.

5. Select the component you want to record onto by touching its destination icon.

6. Prepare the recorder for recording (set Dolby Noise Reduction, cue-up the tape, and so on)

7. Once the recorder is set up, put it into the RECORD mode (the procedure for this will depend upon the specific component you have).

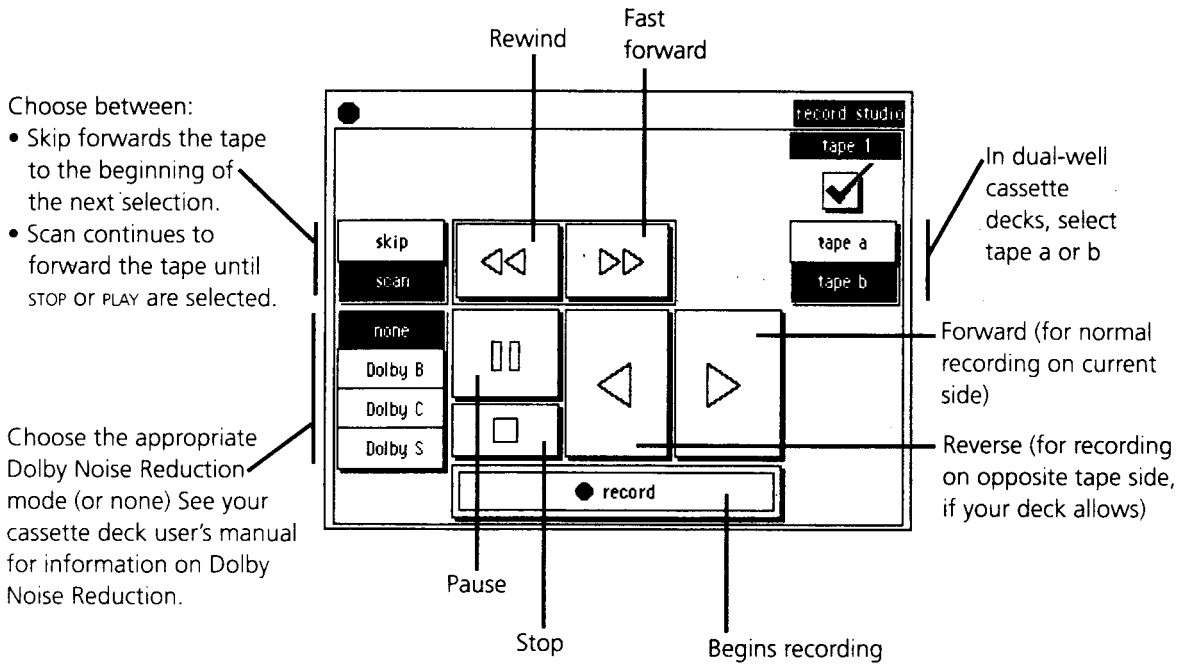
8. Touch the CHECK-MARK key on the component's control screen to return to the Record Studio screen.

9. Touch the SOURCE COMPONENT icon.

10. Put the Source Component into the PLAY mode.

About the cassette deck recording controls

You can only record from a source component that is connected to the Stage 3 Controller's analog inputs. (See 'Selecting the audio input type' on page 48.)


Rewind
Fast forward
Choose between:
• Skip forwards the tape to the beginning of the next selection.
• Scan continues to forward the tape until STOP or PLAY are selected.
record studio
tape 1
skip
scan
tape a
tape b
none
Dolby B
Dolby C
Dolby S
record
In dual-well cassette decks, select tape a or b
Forward (for normal recording on current side)
Reverse (for recording on opposite tape side, if your deck allows)
Choose the appropriate Dolby Noise Reduction mode (or none) See your cassette deck user's manual for information on Dolby Noise Reduction.
Pause
Stop
Begins recording

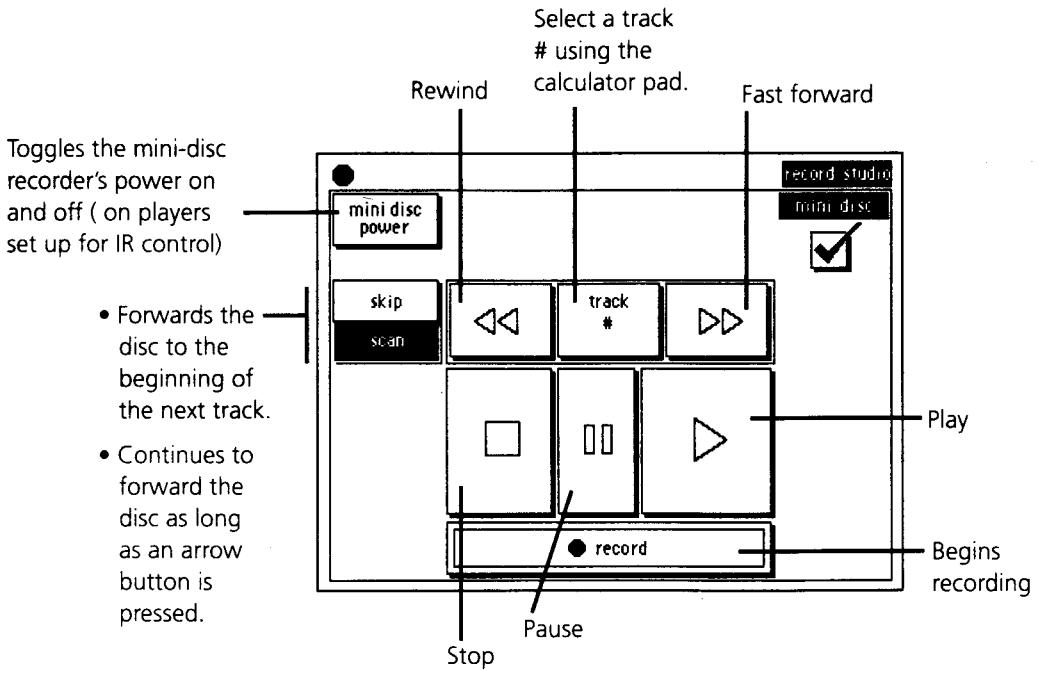
If you have a Kenwood SL16 cassette deck

Kenwood SL16 cassette decks send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these decks:

- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (skip and normal mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

About the Mini-Disc recording controls

If the source is connected to the Stage 3 Controller's digital inputs, you can record using the mini-disc recorder's digital inputs. If the source is connected to the Stage 3 Controller's analog inputs, you can record using the mini-disc recorder's analog inputs.


Select a track # using the calculator pad.
Rewind
Fast forward
Toggles the mini-disc recorder's power on and off (on players set up for IR control)
mini disc power
skip
scan
track #
• Forwards the disc to the beginning of the next track.
• Continues to forward the disc as long as an arrow button is pressed.
Play
record
Begins recording
Pause
Stop

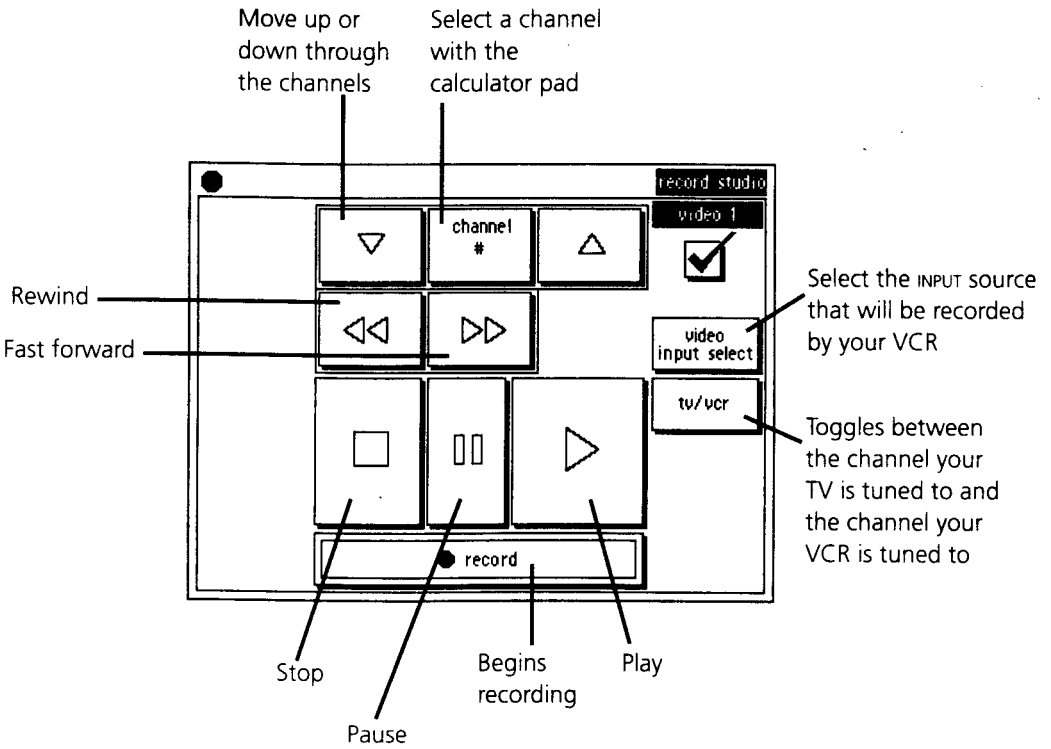
If you have a Kenwood SL16 mini-disc recorder

Kenwood SL16 mini-disc players send information back to the TouchPanel. This means you'll see more information displayed if you're using one of these players.

- The TouchPanel's TRACK button will display the currently playing track number.
- The TouchPanel's STOP, PAUSE, PLAY, FAST FORWARD and REVERSE (SKIP and NORMAL mode) buttons will remain darkened when they're in use (instead of just momentarily turning dark), letting you know which mode is currently active.

About the VCR recording controls

You can record from any source connected to the Stage 3 Controller's analog inputs, or from the VCR's built-in tuner, or from any video components connected directly to the VCR itself (not through the Stage 3 Controller). Two video inputs with record capability are available on the Stage 3 Controller. If both are set-up, each would have its own button on the Recording Studio menu. (See 'General instructions for the recording studio' on page 49.)



Creating system presets

System presets are a powerful part of the Stage 3 Controller system. Although a System Preset is similar to a radio preset that recalls a single radio station, a System Preset can recall several settings at once, or can even reconfigure your entire system. For example, family members can adjust the system to their taste, save the settings as a preset, and then later restore the settings by touching one button.

You can create and store up to 6 different System Presets.

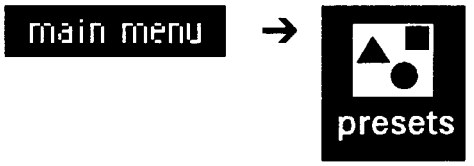
You can use a Preset to carry out several commands to prepare for a particular listening or viewing experience. A single System Preset can perform all of the following tasks:

- Turn the Stage 3 Controller's power on
- Change the input type
- Change the volume of each speaker
- Change the delay time of each speaker
- Change all of the DSP Logic settings
- Change the Midnight Mode's dynamic range compression settings
- Activate any of the Surround modes (stereo, Dolby Surround Pro Logic, and so on)
- Activate THX Cinema or DSP Logic processing
- Change the bass and treble settings
- Select the Source Input
- If the source component is a VCR, laserdisc player, DVD player, CD player, cassette deck or MD recorder, start the Play mode
- If the source is tuner, change the radio station being received.

The Stage 3 Controller stores all of these settings in memory. When you activate that preset, the controller restores all of these settings. You can create another preset with different settings simply by changing the settings and memorizing another preset.

Creating or changing a system preset

1. To get to the System Presets screen, touch these buttons:



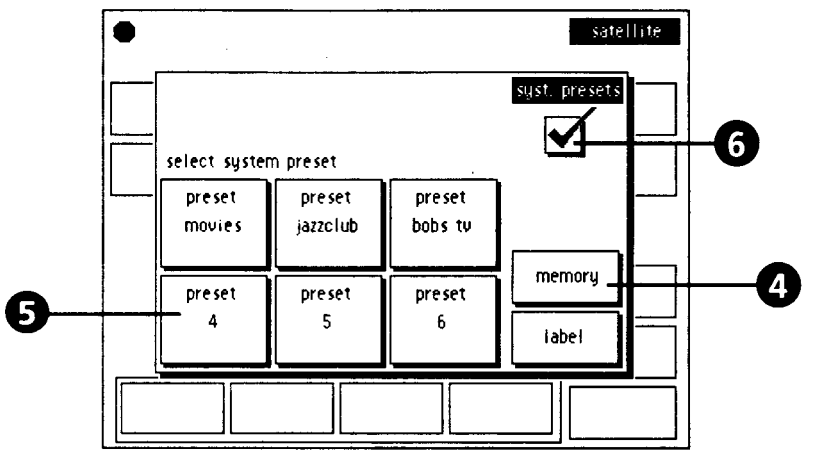
2. Select a source component from the Main Menu. If you select video, laserdisc, DVD, CD, tape or MD, it will automatically be put into play when the preset is activated. If you select tuner, the station playing when you memorize the preset will be selected when the preset is activated (even if the station is not a preset).

3. Go to the Sound screen and make any changes you wish to save in the preset (for example, treble and bass adjustments, speaker level adjustments, or selecting a surround sound mode such as Dolby Pro Logic).

4. Touch the MEMORY button, the Stage 3 Controller memorizes the source component and sound settings.

5. Touch a SYSTEM PRESET button to save the preset. If this preset was already programmed, the old preset information will be replaced with your new instructions.

6. Touch the CHECK-MARK to return to the Sound screen.



Playing a system preset

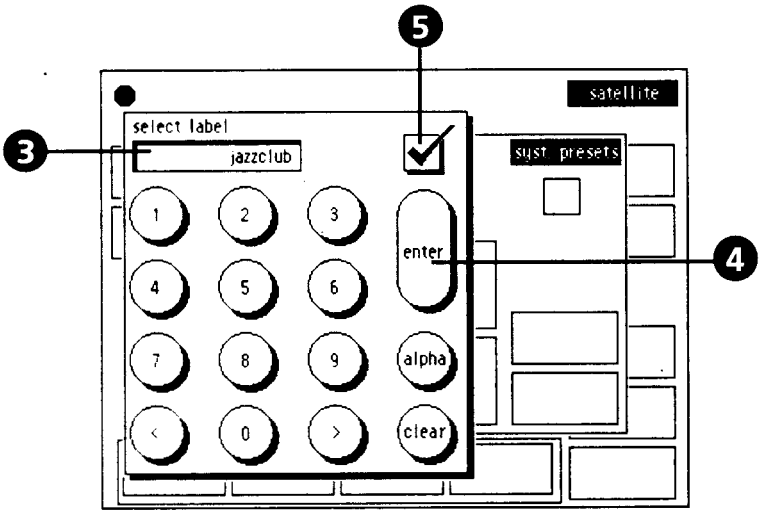
You can play a system preset in two different ways:

- Touch the PRESETS MENU button and then touch a PRESET button from the Preset Screen.
- Play the preset automatically by setting a preset alarm (see the chapter 'Setting the Alarm').

NOTE: If you touch a PRESET button after it has been activated, if the active source component is a VCR, laserdisc, DVD, CD, tape or MD, it will be put into the Pause mode.

Labeling a system preset

1. On the System Preset screen, touch the LABEL button.
2. Touch the system preset you would like to label. The TouchPanel displays the Calculator Pad.
3. Enter a number or name for your system preset with the Calculator Pad. Any combination of letters and numbers is fine, up to 8 characters
4. Touch the ENTER button to accept your label entry.
5. Touch the CHECK-MARK to apply the label and return to the Preset screen.



Setting a system preset alarm

You can have the TouchPanel automatically activate a system preset at a specific time every day.

1. To get to the the Alarm Set screen, touch these buttons:

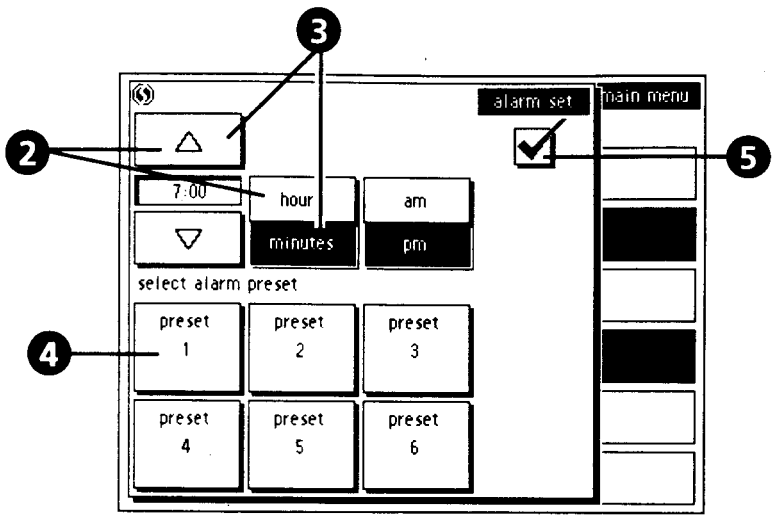
main menu → alarm set

2. To set the hour, touch the HOUR button, then use the ARROW buttons to increase or decrease the time.

3. To set the minutes, touch the MINUTES button, then use the arrow buttons to increase or decrease the time.

4. Select a SYSTEM PRESET button. The System Preset will be activated at the time you set.

5. Touch the CHECK-MARK to exit.

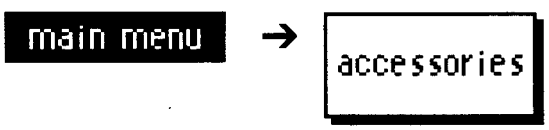


Controlling accessories

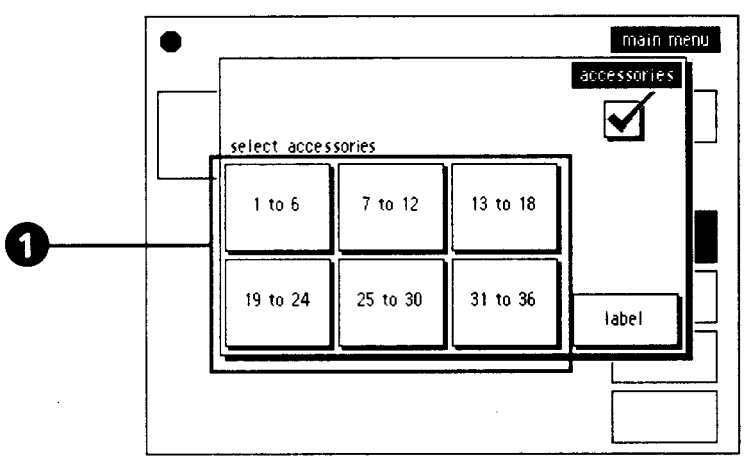
The Stage 3 Controller can activate up to 36 non-audio accessories (divided into 6 groups) that can be controlled using home automation equipment (such as the JDS Stargate system) that is capable of learning IR codes. The learned IR codes allow the accessory to be activated using the TouchPanel. (Touching the accessory's button sends its code out through the controller's IR repeater.)

Check the owner's manual for your home automation system for specific information about programming the TouchPanel's accessory IR codes into the home automation system.

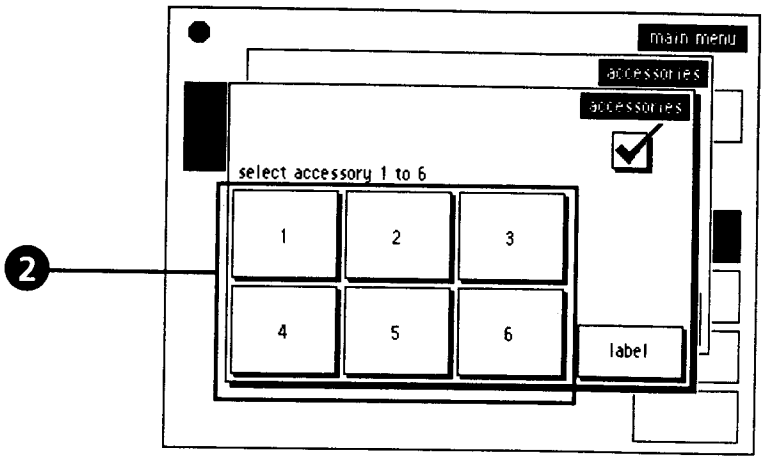
To get to the Accessories screen, touch these buttons:



❶ Touch one of the buttons to get to one of the accessory groups.



The TouchPanel will display that group's accessories screen:

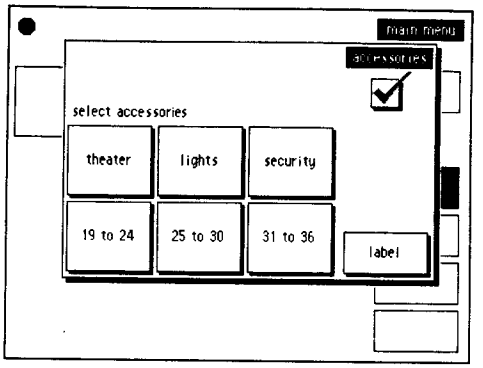


❷ Touch one of the individual accessory buttons to activate that accessory.

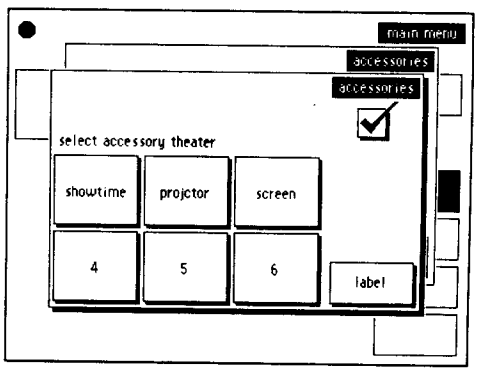
Grouping and labeling accessories

Combining similar accessories into groups and labeling them can make it easier to operate your home automation system.

For example, home theater accessories, lights and home security accessories can be individually grouped and labeled on the ACCESSORIES screen:



And the individual accessory buttons in each group can be labeled (such as in the THEATER group):



Setting the analog input level

Setting the proper input level eliminates distortion that occurs if an audio component's output level is too high. When this happens, the Input Overload Indicator on the Controller will flash red continually or remain red for 1 second or longer, letting you know you should decrease the input level for this component. (Occasional brief flashing red of the input overload indicator is OK).

If you're listening to a component and see that the Input Overload Indicator is flashing red too much or remaining lit, takes these steps:

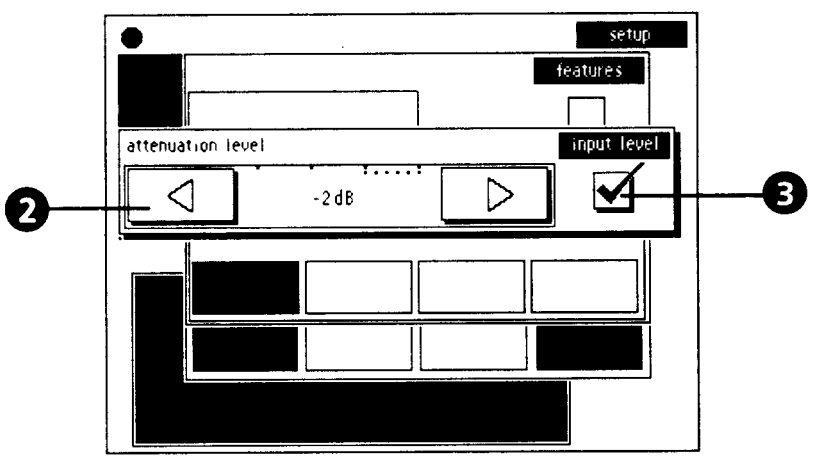
1. To get to the Input Level screen, touch these buttons:

main menu → setup → component → component icon

2. Touch the INCREASE ARROW button. Each touch changes the audio level by 2 dB. Adjust the input to the highest level you can without causing the Input Overload Indicator to flash red frequently or remain red for 1 second or longer.

3. Touch the CHECK-MARK to return to the Features screen.

4. Repeat this process for any component with an audio output that is too high.



- Check that the individual speaker levels are set properly in the Sound Menu.
- Check that the Tape 2 Monitor has not been activated. (The Tape 2 Monitor icon on the Main Menu will be darkened if the circuit has been activated.)

No sound from one or more of the speakers, or the sound is abnormally low

- Check that all cables are connected properly.
- Check that all of the speakers in the system have been set up properly in the Setup (Sound) Menu (the Setup Sound screen will show a darkened icon for each speaker that has been activated).
- Check that the individual speaker levels are set properly in the Sound Menu.

No sound from the surround speakers and/or center speaker

- Check that either Dolby 3 Stereo, Dolby Pro Logic or Dolby Digital (AC-3) has been selected in the Sound Menu.

Sound only from center speaker when Dolby Pro Logic is selected

- Check that the program is in stereo (mono programs will play only through the center speaker in the Dolby Pro Logic mode).

No sound from the secondary speakers

- Check that the Remote Speaker Volume is properly set.
- Check that the source is connected via the analog inputs.
- Check that the analog input is selected on the Input Type selector.

No sound from certain laserdiscs

- Check that the disc contains a digital soundtrack (the disc's cover will bear a 'digital sound' logo). Some older laserdiscs contain only analog soundtracks. If the disc does not have a digital soundtrack, use the Input Type selector to change the input type to Analog.

No sound output to a video or audio tape deck during recording

- Check that the audio cables have been properly connected.
- Check that the source's Analog Input has been selected in the Sound Menu (digital inputs cannot be recorded from).

No video signal from the source component to the TV or recording VCR

- Check that the video source and TV are connected via the same type of connectors. (S-Video input signals are not sent out via the composite video output connections, and composite video input signals are not sent out via the S-Video output connections).

A hum when you select the PHONO input

- Check that the audio cables are plugged securely into the Phono jacks.
- Check that the turntable is grounded on the rear panel. The ground wire should be connected to the screw labeled 'Signal Gnd'.

With a Dolby Digital (AC-3) program, the loud sounds aren't very loud, and the quiet sounds aren't very quiet

- Check that the Midnight Dynamic Range Compression mode hasn't been activated.

Distortion in subwoofer

- Set Subwoofer Bass Limiter (see *Setting up your KC-Z1 Controller*).

The Bass Limiter is set at -24 and there is still audible distress from the subwoofer when listening at your usual volume levels

- If you're using a powered subwoofer, lower the volume on the subwoofer (or on the subwoofer power amplifier) until the distress disappears.
- Use the TouchPanel's Setup Sound menu and reduce the subwoofer's default channel level until the distress disappears.
- Reduce the TouchPanel Volume Control setting until the distress disappears (this will limit how loud you can listen to your system).
- Purchase a higher-quality subwoofer.

The ON/STANDBY indicator flashes red

- Turn the MAIN POWER switch OFF and ON again.
- Reset the Controller's microprocessor by unplugging the power cord from the AC outlet and plugging it back in with the MAIN POWER switch depressed and while holding-down the REMOTE POWER button. (**NOTE:** Resetting the Controller's microprocessor clears all of the stored defaults and setup data, returning the Controller and TouchPanel to their factory-shipped condition. You will have to reset the system, component, speaker and DSP Logic settings. See *Setting up your KC-Z1 Controller.*

The Ref/Peak Level indicator flashes red continually, or stays red for more than 1 second

- Lower the analog input level for the source component you're listening to. (see Setting the analog input level' on page 56)

The Ref/Peak Level indicator flashes green continually, or stays green for more than 1 second

- Do nothing. If the Ref/Peak Level flashes green, the source component output levels are normal, and there is no problem.

You can't receive radio stations

- Check that the station is tuned in properly.
- Check that the antenna is connected properly.

You can't receive a preset station by pressing the corresponding preset button

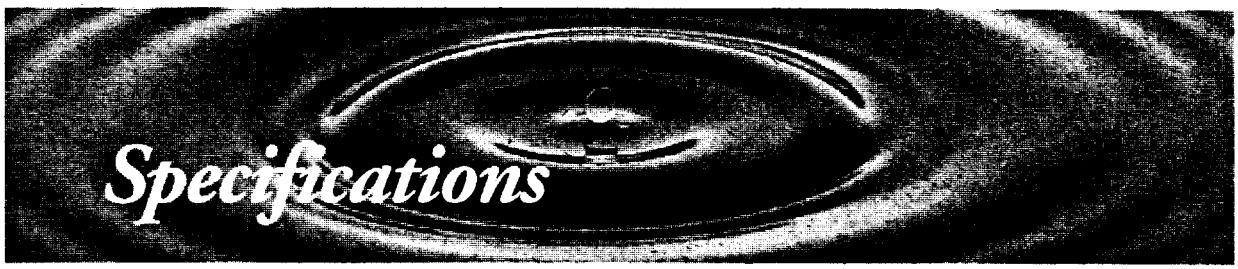
- Check that the preset station is a receivable frequency.
- Check that the preset memory hasn't been cleared because the power cord was unplugged a long time. If so, preset the station again.

Interference with reception

- Check for interference from electrical appliances by turning them OFF. If the interference goes away, leave the appliances OFF.
- Check for interference from the TV set by turning it OFF. If the interference goes away, leave the TV OFF, or move the antenna away from the TV.
- Check for interference from automobiles by moving the antenna as far away from roads as possible. If the interference goes away, permanently install the antenna away from roads.
- Check if the TouchPanel is set on top of the Controller or close to the antennas, and move it away (the fluorescent screen in the TouchPanel can interfere with AM reception).

You've forgotten your 4-digit security code

- Reset the TouchPanel's microprocessor by pressing the RESET button on its rear panel with a pointed object while holding-down the MUTE button.



Preamp section

Total harmonic distortion:		
All channels except for Subwoofer channel		
	0.003%	(1 kHz, 1.0 volt)
	0.003%	(20 Hz to 20 kHz, 1.0 volt)
Subwoofer Channel	0.05%	(31.5 Hz, 1.0 volt)
Frequency response		
All inputs except for phono input	6 Hz to 100 kHz, +0 dB, -3 dB	
Phono RIAA response	20 Hz to 20 kHz, ±0.5 dB	
Signal-to-noise ratio (IHF 1978):		
All inputs except for phono input	101 dB	
Phono input (MM)	87 dB	
Input Sensitivity/impedance		
All inputs except for phono input	200 mV/47 k-ohms	
Phono input (MM)	2.5 mV/47 k-ohms	
Tone Control		
Bass	±10 dB (100 Hz)	
Treble	±10 dB (10 kHz)	
Output level/impedance		
Surround: All channels except for Subwoofer channel		
	1.0 volt / 180 ohms (1 kHz, 0.003% THD)	
Surround: Subwoofer channel	1.0 volt / 180 ohms (31.5 Hz, 0.003% THD)	

Video section

Input level/impedance	
Composite Signal:	1.0 volt peak-to-peak / 75 Ω
S-video: Luminance signal	1.0 volt peak-to-peak / 75 Ω
S-video: Chrominance signal	0.286 volt peak-to-peak /75 Ω
Output level/impedance	
Composite Signal:	1.0 volt peak-to-peak / 75 Ω
S-video: Luminance signal	1.0 volt peak-to-peak / 75 Ω
S-video: Chrominance signal	0.286 volt peak-to-peak /75 Ω

Digital section

Sampling frequency	
32 kHz, 44.1 kHz, 48 kHz	
Input level/impedance	
All inputs: Optical	-15 dBm to -21 dBm, 660 nm ± 30 nm
All inputs: Coaxial	0.5 volt peak-to-peak / 75 Ω
Output level/impedance	
All inputs: Optical	-15 dBm to -21 dBm, 660 nm ± 30 nm
All inputs: Coaxial	0.5 volt peak-to-peak / 75 Ω

FM tuner section

Tuning frequency range	87.5 to 108 MHz
Useable sensitivity (Mono)	1.2 µV (75 Ω) / 13.2 dBf (75 kHz deviation, s/n 30 dB)
50 dB quieting sensitivity (Stereo)	32 µV (75 Ω) / 41.2 dBf (75 kHz deviation)
Total harmonic distortion (1 kHz)	
Mono	0.6% (65.2 dBf input)
Stereo	0.7% (65.2 dBf input)
Signal-to-noise ratio (1 kHz, 75 kHz DEV.)	
Mono	75 dB (65.2 dBf input)
Stereo	68 dB (65.2 dBf input)
Selectivity (± 400 kHz)	50 dB
Stereo Separation (1 kHz)	40 dB
Frequency response	30 Hz to 15 kHz, +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range	530 Hz to 1700 kHz
Useable sensitivity (30% modulation, s/n 20 dB)	16 µV / (500 µV/m)
Total harmonic distortion	0.7%
Signal-to-noise ratio (30% modulation, 1 mV input)	45 dB
Selectivity	30 dB

General

Power consumption	90 W
AC outlet (switched)	3 (total 200 W max.)
Dimensions:	
Width	17-5/16" (440 mm)
Height	6-1/4" (159 mm)
Depth	17-5/16" (440 mm) without TouchPanel
Weight (net)	26.9 lb (12.2 kg)

Kenwood continually tries to improve its products, so specifications may change without notice.